

**The AVOYELLES SPORTSMEN'S LEAGUE, INC., et al., Plaintiffs
Appellees Cross-Appellants,**

v.

**John O. MARSH, Jr., Secretary of the Army, etc., et al., Defendants,
Elder Realty Company, Inc., Defendant
Appellant Cross-Appellee.**

**The AVOYELLES SPORTSMEN'S LEAGUE, INC., et al., Plaintiffs-
Appellees,**

v.

**John O. MARSH, Jr., Secretary of the Army, etc., et al., Defendants-
Appellants.**

**Elder Realty Company, Inc., Defendant-Appellant,
George Bartmess, et al., Intervenor-Appellants.
Louisiana Department of Agriculture, Movant-Appellant.**

**Nos. 702653, 82-3231.
United States Court of Appeals,
Fifth Circuit.
Sept. 26, 1983.**

**Appeals from the United States District Court for the Western District of
Louisiana.**

**Before CLARK, Chief Judge, THORNBERRY and RANDALL, Circuit
Judges.**

RANDALL, Circuit Judge:

This is an appeal from a district court judgment that enjoined the private defendant [Foot Note 1] from any additional clearing, except by permit under 33 U.S.C. 1344 (Supp. V 1981), of certain lands determined by the district court to be wetlands. The federal defendants' [Foot Note 2] contend that the district court should have reviewed the Environmental Protection Agency's ("EPA") final wetlands determination (attached as an appendix to this opinion) on the basis of the administrative record, and that the court erred in adopting its own wetlands determination instead of reviewing the agency's determination under the arbitrary and capricious standard. The federal defendants dispute the district court's conclusion that the mere removal of vegetation from wetlands constitutes a discharge of a pollutant under section 301(a) of the Clean Water Act ("CWA"), 33 U.S.C. 1311(a) (1976). [Foot Note 3] The private defendants contest the validity of the district court's determination that approximately ninety percent of their land is a wetland, as well as the court's conclusion that their landclearing activities fall

under the CWA's prohibition on the discharge of pollutants into waters of the United States.

For the reasons set forth below, to the extent that the district court's decision that ninety percent of the Lake Long Tract is a wetland is inconsistent with the EPA's determination, the decision of the district court is reversed. The court's determination that the private defendants' actual landclearing activities require permits is affirmed.

I. FACTUAL AND PROCEDURAL BACKGROUND.

This case concerns an approximately 20,000 acre tract of land (the "Lake Long Tract") in Avoyelles Parish, Louisiana. The tract lies within the Bayou Natchitoches basin, an area of approximately 140,000 acres, which, along with the Ouachita, Black and Tensas river basins, makes up the Red River backwater area. The Bayou Natchitoches basin is subject to flooding during the spring months, and it experiences an average rainfall of sixty inches per year.

Much of the basin had been cleared of forest before the private defendants began their landclearing activities, but 80,000 acres were still forested. The Lake Long Tract made up a quarter of this forested area. The topography of the tract itself is uneven, resulting in some areas with permanent water impoundments and other drier areas that support a variety of plant species.

The private defendants own the Lake Long Tract. They decided that the land could be put to agricultural use, specifically soybean production. Consequently, they began a program of large-scale deforestation in June of 1978. [Foot Note 4] Using bulldozers with shearing blades that "floated" along the ground, the defendants cut the timber and vegetation at or just above ground level. The trees were then raked into windrows, burned, and the stumps and ashes were disced into the ground by other machinery. The shearing and raking caused some leveling of the tract, and the defendants dug one drainage ditch.

On August 25, 1978, the Vicksburg District of the Army Corps of Engineers ordered defendant Prevot to halt his activities pending a wetlands determination by the Corps. Thereafter, Dr. Donald G. Rhodes, an expert consultant employed by the Corps, undertook a comprehensive vegetative mapping of the Lake Long Tract and determined that thirty-five percent of it was a wetland. In October, 1978, the Fish and Wildlife Service wrote a letter to the Corps stating that the Service believed that the entire tract was a wetland. After Dr. Rhodes had made his determination, the landowners resumed their activities on the portion of the tract that the Corps had not designated as a wetland.

On November 8, 1978, the plaintiffs [Foot Note 5] brought this citizens' suit [Foot Note 6] against a number of Corps and EPA officials, as well as against the private landowners. The plaintiffs claimed, inter alia, [Foot Note 7] that the landclearing activities would result in the discharge of dredged and fill material into the waters of the United States in violation of sections 301(a) and 404 of the CWA, 33 U.S.C. 1311, 1344 (1976 & Supp. V 1981), [Foot Note 8] and also result in the discharge of pollutants into

the waters of the United States in violation of section 402 of the CWA, 33 U.S.C. 1342 (1976 & Supp. V 1981). [Foot Note 9] The plaintiffs requested a declaration that the tract was a wetland within the scope of the CWA, [Foot Note 10] that the private defendants could not engage in their landclearing activities without obtaining a permit from the EPA or the Corps, and that the federal defendants had failed to exercise their "mandatory duty" [Foot Note 11] to designate the tract a wetland and to order the private defendants to cease and desist from discharging pollutants and dredged materials. The plaintiffs also sought injunctive relief against the federal defendants to require them to exercise their jurisdiction over the property and to issue cease-and-desist orders until the private defendants obtained the requisite permits. The district court immediately issued a temporary restraining order, preventing the private defendants from engaging in landclearing activities pending the court's action on the plaintiffs' motion for a preliminary injunction.

On January 17, 1979, the district court granted the plaintiffs' motion for a preliminary injunction and ordered the federal defendants to prepare a final wetlands determination within sixty days. All of the private parties were to have the opportunity to participate in the administrative proceedings, and the federal defendants were to file a preliminary report within forty-five days. The court allowed the private defendants to engage in normal cultivation on the more than 10,000 acres that had been cleared, but ordered them to apply for a permit with respect to the area already designated by the government as a wetland and enjoined them for sixty days from engaging in landclearing activities on the remainder of the tract.

The parties complied with the court's preliminary order, and the EPA submitted its final wetlands determination on March 26, 1979. [Foot Note 12] After examining the vegetation, soil conditions, and hydrology of the tract, the EPA concluded that approximately eighty percent of the land was a wetland. In a brief final paragraph, the EPA also offered its views of the types of activities that would require a section 404 permit.

At the private defendants' request, the district court agreed to bifurcate the consideration of the two major issues in the case: (1) how much of the Lake Long Tract was a wetland, and (2) which activities required a section 404 permit. After extensive trials on both issues, the court decided that a section 404 permit was required for the landclearing activities and that over ninety percent of the Lake Long Tract was a wetland. [Foot Note 13] The court then enjoined the private defendants from engaging in any additional landclearing activities, without a section 404 permit, on the land that the court had determined to be a wetland, other than the land already cleared. The defendants timely appealed.

II. THE WETLANDS DETERMINATION.

The procedural posture of this case is, to say the least, unusual. Issues were raised by the parties at one stage of the litigation only to be forgotten or ignored by both the parties and the court at a later stage in the proceedings. Indeed, as in Vermont Yankee Nuclear

Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 540, 98 S.Ct. 1197, 1210, 55 L.Ed.2d 460 (1978), the parties in this litigation have "changed positions as nimbly as if dancing a quadrille." [Foot Note 14] In deciding to give the federal defendants an opportunity to make a final wetlands determination, the district court recognized that the federal defendants bore the "primary responsibility" for the determination of which lands were wetlands:

But these matters often come up to a court in the nature of a review of a ruling made by a Governmental agency. In this instance one of the primary requests for relief made by the plaintiffs was that the agencies be directed to take up this matter of delineation of wetlands, the definition of what are wetlands, and then the enforcing of their order after it is so defined. Also, coupled with that was a prayer more directly to the merits; that is, that the Court itself makes such definitions and defines them. This is something which does not come up every day, and Congress has burdened and designated certain Government agencies with the responsibility for doing just what the prayer in this petition requests.... Whatever the reason, matter of wetlands in this area, the definition of what is wetlands in that area is not now definite.... [B]asically speaking, since this is a responsibility which Congress has designated the Corps and two other Government agencies to accomplish, it is their primary responsibility and they have the expertise to handle the question. And since in just about all cases that the Court has come into contact with, these cases have been cases in which the Court has the benefit of the consideration given by the agencies and is not called upon to be the agency of first impression, or to use its own initiative in making a definition or enforcing it. It has been asked to review a definition made by persons who are experts in that field and have accumulated expert testimony.... [T]he Court ordinarily has the benefit of this consideration. And I feel that the Court in this instance should also have the benefit of this consideration, if it is possible to do so.

Preliminary Injunction Hearing Transcript at 34-36. After asking the federal agencies to use their expertise in making a final wetlands determination, however, the court proceeded to conduct a de novo trial on the wetlands issue and to substitute its judgment for the EPA's, without any explanation in its opinion of why it had found it necessary to go outside of the administrative record or of the standard that it was using to review the EPA's determination. Thus, while it may not be a sea that we have all been cast adrift upon, we have nevertheless been cast adrift.

The federal defendants maintain that the court's de novo review of the EPA's final wetlands determination was inappropriate. They contend that the district court should have reviewed the agency's determination on the basis of the administrative record, and that the agency's determination should have been upheld as long as it was not "arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. 706(2)(B) (1976). We agree with the federal defendants that the district court's wetlands determination must be set aside because the court applied the wrong standard in reviewing the agency's determination.

A. Standard of Review.

Since the Clean Water Act does not set forth the standards for reviewing the EPA's or the Corps' decisions, we look to the Administrative Procedure Act (APA), 5 U.S.C. 701 et seq. (1976), for guidance. See *Save the Bay, Inc v. Administrator of the EPA*, 556 F.2d 1282 (5th Cir.1977); *Natural Resources Defense Council, Inc v. Train*, 510 F.2d 692 (D.C.Cir.1975). In general, the APA provides that a court shall set aside agency findings, conclusions and actions that are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," or that fail to meet statutory, procedural or constitutional requirements. 5 U.S.C. 706(2)(A), (B), (C), (D). This standard of review is highly deferential. A final agency decision is "entitled to a presumption of regularity." *Citizens to Preserve Overton Park, Inc v. Volpe*, 401 U.S. 402, 415, 91 S.Ct. 814, 823, 28 L.Ed.2d 136 (1971). While the court "must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgement," and while "this inquiry into the facts is to be searching and careful, the ultimate standard of review is a narrow one." *Id* at 416, 91 S.Ct. at 824. In *Overton Park*, the Supreme Court stated unequivocally that the "court is not empowered to substitute its judgement for that of the agency." *Id*; accord *Bowman Transportation, Inc. v. Arkansas-Best Freight System, Inc.*, 419 U.S. 281, 285, 290, 95 S.Ct. 488, 442, 444, 42 L.Ed.2d 447 (1974); *Louisiana Environmental Society, Inc v. Dole*, 707 F.2d 116, 118-19 (5th Cir. 1983); *City of Houston v. FAA*, 679 F.2d 1184, 1190 (5th Cir.1982).

In *Ethyl Corp. v. EPA*, 541 F.2d 1 (D.C. Cir.) (en banc), cert. denied, 426 U.S. 941, 96 S.Ct. 2663, 49 L.Ed.2d 394 (1976), the Court of Appeals for the District of Columbia explained the boundaries of a court's role in reviewing an agency decision under the arbitrary and capricious standard. The *Ethyl* court directed reviewing courts to "immerse" themselves in the evidence in the administrative record in order to determine whether the "agency decision was rational and based on consideration of the relevant factors." 541 F.2d at 36 (citing *Overton Park*). The court warned, however, that this effort to understand the evidence must be performed with a "conscientious awareness of the limited nature" of the court's function and the need to defer to the agency's expertise:

The enforced education into the intricacies of the problem before the agency is not designed to enable the court to become a superagency that can supplant the agency's expert decision-maker. To the contrary, the court must give due deference to the agency's ability to rely on its own developed expertise

Thus, after our careful study of the record, we must take a step back from the agency decision. We must look at the decision not as the chemist, biologist or statistician that we are qualified neither by training nor experience to be, but as a reviewing court exercising our narrowly defined duty of holding agencies to certain minimal standards of rationality.

Id. (citations and footnotes omitted).

The basis for a court's review of an agency decision is subject to narrow limitations. Where an agency's decision is based on an administrative record, the decision should be reviewed in light of that record. *Camp v. Pitts*, 411 U.S. 138, 142-43, 93 S.Ct. 1241, 1244, 36 L.Ed.2d 106 (1973); accord *Louisiana Environmental Society*, *supra*. If the

agency decision is not sustainable on the basis of the administrative record, then "the matter should be remanded to [the agency] for further consideration." *Camp*, 411 U.S. at 143, 93 S.Ct. at 1244 (emphasis added); accord *Vermont Yankee Nuclear Power Corp. v. National Resources Defense Council, Inc.*, 435 U.S. 519, 549, 98 S.Ct. 1197, 1214. 55 L.Ed.2d 460 (1978).

In "certain narrow, specifically limited situations," agency action may also be set aside if it is not supported by "substantial evidence," 5 U.S.C. 706(2)(E), or, in "other equally narrow circumstances," a court may engage in de novo review of the action and set it aside if it is "unwarranted by the facts", 5 U.S.C. 706(2)(F) *Overton Park*, 401 U.S. at 414, 91 S.Ct. at 822. De novo review under section 706(2)(F) is authorized only "when the action is adjudicatory in nature and the agency factfinding procedures are inadequate," or "when issues that were not raised before the agency are raised in a proceeding to enforce nonadjudicatory agency action." *Overton Park*, 401 U.S. at 415, 91 S.Ct. at 823. No one contends that the substantial evidence test applies to this case, nor is there any indication that de novo review was authorized by the presence of either of the circumstances mentioned in *Overton Park*. [Foot Note 15]

Had this case commenced as a challenge to the Corps' decision to grant or deny a section 404 dredge-and-fill permit, the district court would clearly have been expected to review the agency's decision under the arbitrary and capricious standard on the basis of the administrative record. See *Buttrey v. United States*, 690 F.2d 1170, 1183-85 (5th Cir. 1982), cert. denied, -- U.S. --, 103 S.Ct. 2087, 77 L.Ed.2d 298 (1983) (Corps' denial of permit reviewed on administrative record under arbitrary and capricious standard); *Joseph G. Moretti, Inc. v. Hoffman*, 526 F.2d 1311, 1312 (5th Cir.1976) (discovery not improperly curtailed because challenge to Corps' denial of permit must be reviewed on basis of administrative record; Corps' decision was not arbitrary and capricious); *Di Vosta Rentals, Inc. v. Lee*, 488 F.2d 674, 678-79 (5th Cir. 1973), cert. denied, 416 U.S. 984, 94 S.Ct. 2387, 40 L.Ed.2d 761 (1974) (court's review of Corps' permit decision is limited to whether that decision is arbitrary and capricious in light of administrative record). [Foot Note 16] The plaintiffs argue that the court's de novo review of the final wetlands determination was appropriate in this case because the EPA's determination was a jurisdictional decision. We disagree.

This is not a case where the parties have challenged the federal agency's jurisdiction to assert any authority over the tract. The landowners have conceded that thirty-five percent of the tract is a wetland subject to the federal defendants' regulatory jurisdiction under the CWA. We are not confronted with a situation where the court must determine whether the property falls under the agency's jurisdiction at all before it may determine whether the exercise of the agency's jurisdiction is appropriate. See, e.g., *United States v. Lee Wood Contracting, Inc.*, 529 F.Supp. 119 (E.D.Mich.1981) (enforcement action holding that land is "neighboring wetland" within Corps' jurisdiction); *Parkview Corp. v. Department of the Army Corps of Engineers*, 469 F.Supp. 217 (E.D.Wis.1979) (granting Corps' summary judgment motion that the land is a wetland under 1974 definition within Corps' jurisdiction); *P.F.Z Properties, Inc. v. Train*, 393 F.Supp. 1370 (D.D.C.1975) (holding that Corps had jurisdiction over proposed building site).

The question in this case is the extent, not the existence, of agency jurisdiction. Since there is no assertion that the EPA's jurisdiction is conspicuously lacking, its findings with respect to the extent of its jurisdiction must be reviewed under the same standard as any other administrative findings. See *Federal Power Commission v. Transcontinental Gas Pipe Line Corp.*, 423 U.S. 326, 381, 96 S.Ct. 579, 582, 46 L.Ed.2d 533 (1976) (commissioner's findings reviewed under "substantial evidence" standard where existence of gas shortage formed "the factual predicate necessary to the Commission's assertion of authority"); *Buttrey*, supra, 690 F.2d at 1185-86 (Corps' determination of the extent of wetlands reviewed under arbitrary and capricious standard); cf. *Deltona Corp. v. Alexander*, 682 F.2d 888, 893-94 (11th Cir.1982) (upholding district court's grant of summary judgment in Corps' favor on jurisdictional issue because plaintiff had not exhausted administrative remedies and extent of wetlands is type of decision necessitating agency expertise).

The wetlands determination is precisely the type of agency decision that is normally subject to limited judicial review. The EPA developed an extensive administrative record in making its decision; it collected reports from its own expert consultants, as well as from the parties. The determination itself, which requires an analysis of the types of vegetation, soil and water conditions that would indicate the existence of wetlands, is the kind of scientific decision normally accorded significant deference by the courts. See *Deltona Corp.*, supra; *Hercules, Inc. v. EPA*, 598 F.2d 91, 106 (D.C.Cir. 1978); *Ethyl*, supra. [Foot Note 17] De novo review would permit the courts to intrude into an area in which they have no particular competence, and the presentation of the scientific evidence at both the administrative and judicial levels of the proceeding would result in inefficiencies and delays where they are most harmful. See *Sierra Club v. Sigler*, 695 F.2d 957, 981 (5th Cir.1983) (noting that "protracted litigation in environmental cases can kill projects by delay"). The arbitrary and capricious standard affords the proper deference to the agency's scientific expertise, while the requirement that a court engage in a thorough in-depth review of the administrative record to ascertain whether the agency has considered all of the relevant factors and whether the agency's decision is rational, *Overton Park*, 401 U.S. at 416, 91 S.Ct. at 823-24, assures that deference to the agency does not result in abdication of judicial responsibility. See *Ethyl*, Supra, 541 F. 2d at 36-37.

At trial, the landowners objected to the EPA's reliance on the administrative record, claiming that it was not a true administrative record because it had been "prepared by order of the court, which was not in the ordinary course of administrative proceedings." 23 Record at 444-45. The administrative determination in this case is something of a hybrid since it was prepared in a sixty day period under a court order. In the absence of any indication that it was actually tainted by the nature of the proceedings, however, see *Overton Park*, 401 U.S. at 420, 91 S.Ct. at 825 (court may go outside of administrative record only upon showing of bad faith or improper behavior), the administrative record compiled by the agency should have served as the "focal point" for judicial review of the EPA's final wetlands determination. See *Camp*, supra, 411 U.S. at 142, 93 S.Ct. at 1244; *Louisiana Environmental Society*, supra, 707 F.2d at 119.

We hold that the district court erred in substituting its own wetlands determination for the EPA's instead of reviewing the agency's decision, as supported by the administrative record, under the arbitrary and capricious standard. Under different circumstances, we might end our review of the wetlands determination here and remand to the district court for review of the agency decision under the appropriate standard. This litigation has, however, already gone on long enough, particularly because it involves the type of project that may be killed by the delay. See *Sierra Club*, *supra*. Because the nature of the dispute over the EPA's wetlands determination is primarily a legal one, subject to our own independent review, and because the reasonableness of the EPA's decision turns on an analysis of documentary evidence, rather than on the credibility of witnesses appearing before a trial judge, we do not believe that anything could happen in the district court on remand that would change our view of whether the EPA's determination was arbitrary and capricious. Accordingly, we have decided to review the agency's determination ourselves. See *Sierra Club*, *supra*, 695 F.2d at 981; *Di Vostra*, *supra*, 488 F.2d at 679.

B. Methodology.

The private defendants claim that the EPA's decision to examine additional species of vegetation, [Foot Note 18] as well as the soil and hydrology, of the tract, in making its wetlands determination constituted rulemaking. Emphasizing the substantial difference between the Vicksburg District consultant's methodology and determination and the EPA's, [Foot Note 19] and the probable impact of this change in methodology throughout the State of Louisiana, [Foot Note 20] the landowners contend that the agencies could not make such a drastic change in their methodologies without complying with the notice and comment procedures required by 5 U.S.C. 553.[Foot Note 21] The plaintiffs and federal defendants argue that the change in methodology was merely an interpretation of the Corps' existing wetlands definition, 33 C.F.R. 323.2(c) (1982), [Foot Note 22] and that therefore notice and comment proceedings were not required. 5 U.S.C. 553(b)(A) (notice and comment requirements do not apply to "interpretative rules, general statements of policy, or rules of agency organization, procedure or practice."). All of the parties recognize that we must look beyond the label to the substance of an administrative action in order to determine whether rulemaking procedures were required. *CBS, Inc v. United States*, 316 U.S. 407, 419, 62 S.Ct. 1194, 1201, 86 L.Ed. 1563 (1942).

1. Legislative Or Interpretative Rule.

The APA defines the term "rule" broadly enough to include virtually every statement an agency may make, 5 U.S.C. 551(4), [Foot Note 23] but not every ruling requires the procedures set forth in section 553. While "legislative" or "substantial" rules may only be promulgated in compliance with section 553 "interpretative" rules are expressly excluded from the section.

In *Batterton v. Marshall*, 648 F.2d 694 (D.C.Cir.1980), the District of Columbia Circuit reviewed some of the differences between the two types of rulings:

Legislative rules . . . grant rights, impose obligations, or produce other significant effects on private interests. They also narrowly constrict the discretion of agency officials by largely determining the issue addressed. Finally, legislative rules have substantive legal effect.

648 F.2d at 701-02 (footnotes omitted). In contrast, interpretative rules

are not determinative of issues or rights addressed. They express the agency's intended course of action, its tentative view of the meaning of a particular statutory term, or internal house-keeping measures organizing agency activities. They do not . . . foreclose alternate courses of action or conclusively affect rights of private parties.

Id. at 702 (footnotes omitted). Perhaps most importantly, interpretative rules are subject to more extensive judicial review than are legislative rules. Id. [Foot Note 24] The Batterton court admitted, however, that it would be "less than candid if [it] pretended that the labels . . . neatly place particular agency actions within any particular category. Instead, the categories have 'fuzzy perimeters' and establish 'no general formula.' " 648 F.2d at 702 (quoting *Pacific Gas & Electric Co. v. FPC*, 506 F.2d 33, 38 (D.C.Cir.1974); *F. Cooper, Administrative Agencies and the Courts* 87 (1951)); see also *NLRB v. Wyman-Gordon Co.*, 394 U.S. 759, 770, 89 S.Ct. 1426, 1432, 22 L.Ed.2d 709 (1969) (Black, J., concurring in the result) (the line between an agency's quasi-legislative function and its jurisdictional function is not always clear); see generally; 2 K. Davis, *Administrative Law Treatise* 7 (2d ed. 1983).

Further, an agency has the discretion to proceed through case-by-case adjudications and interpretative orders, rather than through the rulemaking process, for the agency will often confront special problems necessitating a flexible approach to their resolution. In *SEC v. Chenery Corp.*, 332 U.S. 194, 67 S.Ct. 1575, 91 L.Ed. 1995 (1947), the Supreme Court explained:

The function of filling in the interstices of the Act should be performed, as much as possible, through this quasi-legislative promulgation of rules to be applied in the future. But any rigid requirement to that effect would make the administrative process inflexible and incapable of dealing with many of the specialized problems which arise. . . . Not every principle essential to the effective administration of a statute can or should be cast immediately into the mold of a general rule. Some principles must await their own development, while others must be adjusted to meet particular, unforeseeable situations. In performing its important functions in these respects, therefore, an administrative agency must be equipped to act either by general rule or by individual order. To insist upon one form of action to the exclusion of the other is to exalt form over necessity.

332 U.S. at 202, 67 S.Ct. at 1580; accord *Viacom International, Inc. v. FCC*, 672 F.2d 1034, 1042 (2d Cir.1982); *Giles Lowery Stockyards, Inc. v. Department of Agriculture*, 565 F.2d 321, 325 (5th Cir.1977), cert. denied, 436 U.S. 957, 98 S.Ct. 3070, 57 L.Ed.2d 1122 (1978); *West v. Chafee*, 560 F.2d 942, 947 (8th Cir.1977); *Port Terminal Railroad*

Association v. United States. 551 F.2d 1336, 1345 (5th Cir.1977). In *Cheney*, the Supreme Court recognized:

In other words, problems may arise in a case which the administrative agency could not reasonably foresee, problems which must be solved despite the absence of a relevant general rule. Or the agency may not have had sufficient experience with a particular problem to warrant rigidifying its tentative judgment into a hard and fast rule. Or the problem may be so specialized and varying in nature as to be impossible of capture within the boundaries of a general rule. In those situations, the agency must retain power to deal with the problems on a case-to-case basis if the administrative process is to be effective. There is thus a very definite place for the case-by-case evolution of statutory standards. And the choice made between proceeding by general rule or by individual, ad hoc litigation is one that lies primarily in the informed discretion of the administrative agency.

332 U.S. at 202-03, 67 S.Ct. at 1580.

The critical question in any challenge to the propriety of the method used by the agency in reaching its decision is whether the decision-making procedure satisfied the underlying purpose of the APA: affording a procedure that is fair to the affected parties. *Batterton*, supra, 648 F.2d at 703; *National Helium Corp. v. Federal Energy Administration*, 569 F.2d 1137, 1146 (Temp.Emer.Ct.App.1978). We hold that under the circumstances of this case, the EPA's wetlands methodology was not void for failure to comply with the section 553 notice and comment requirements because the methodology was an interpretative application, not an amendment of, the 1977 definition.

The federal defendants' development of the methodology appears to have been a response to the agencies' perception that the Corps' 1977 amendments of its regulations [Foot Note 25] expanded the scope of its wetlands definition. Unlike the rules establishing fixed criteria to control the agencies' decisions in the cases cited by the landowners, see, e.g., *Batterton*, supra (regulation established critical statistical variable in formula for computing unemployment rate); *Pickus v. United States Board of Parole*, 507 F.2d 1107 (D.C.Cir.1974) (Parole Board's use of guidelines established specific factors for determining parole eligibility); *Lewis-Mota v. Secretary of Labor*, 469 F.2d 478 (2d Cir.1972) (regulation effectively repealed prior method for obtaining immigration visa); *Texaco, Inc. v. Federal Power Commission*, 412 F.2d 740, 741 (3d Cir.1969) (regulation required payment of interest "compounded monthly"), the federal defendants' methodology was designed as a flexible approach to implementation of the Corps' definition. In fact, some of the factors that the landowners object to appear to have been included to insure that the agencies did not unduly expand the definition. The methodology requires an analysis of soil and hydrology because the types of vegetation added to the agencies' calculus may or may not be wetland indicators; thus, the analysis of soil and hydrology may narrow, as well as expand, the agencies' jurisdiction. Final Wetlands Determination at 3, 2 Record at 375.

While the landowners' challenge to the methodology is cast in procedural terms, their underlying contention is really nothing more than a challenge to the EPA's interpretation of the regulation. The EPA maintains that the 1977 amendments, not the methodology, expanded the Corps' wetlands definition. The landowners contend that the amendment was purely technical and was not intended to add facultative hydrophytes to the types of vegetation that would indicate the existence of wetlands. Because the landowners view the methodology as a significant expansion--or amendment--of the 1977 definition, they contend that rulemaking was required. We proceed, therefore, to consider whether the federal defendants' interpretation alters the regulation.

2. Vegetation Typically Adapted for Life in Saturated Soil Conditions.

In reviewing the federal defendants' interpretation, we must keep in mind that "the interpretation given [a] statute by the officers or agency charged with its administration" is entitled to substantial deference. *Ford Motor Credit Co. v. Milhollin*, 444 U.S. 556, 566, 100 S.Ct. 790, 797, 63 L.Ed.2d 22 (1980) (quoting *Zenith Radio Corp. v. United States*, 437-U.S. 443, 450, 98 S.Ct. 2441, 2445, 57 L.Ed.2d 337 (1978)); see also *Udall v. Tallman*, 380 U.S. 1, 16, 85 S.Ct. 792, 801, 13 L.Ed.2d 616 (1965); *Quarles v. St. Clair*, 711 F.2d 691 at 706 (5th Cir.1983). An agency's construction of its own regulations is entitled to even greater deference. *Ford Motor*, supra, 444 U.S. at 566, 100 S.Ct. at 797; *Udall*, supra, 380 U.S. at 16, 85 S.Ct. at 801. Regardless of whether the court would have arrived at the same interpretation, if the agency's interpretation is reasonable the court must respect it. *Udall*, supra; *Kinnett Dairies, Inc. v. Farrow*, 580 F.2d 1260, 1270 (5th Cir.1978).

A number of factors will influence the amount of deference due in a given case. These include: the degree of scientific or technical agency expertise necessarily drawn on in reaching the interpretation, *Ford Motor*, supra; *Kinnett*, supra; "the consistency of the interpretation and the length of adherence to it, undisturbed by Congress; [and] the explicitness of the congressional grant of authority to the agency." *Quarles*, supra. Evaluation of these factors requires a high degree of deference in this case.

Congress has delegated substantial authority to the EPA administrator, and with respect to the dredge-and-fill permits, to the Corps, for the implementation of the CWA. See, e.g., 33 U.S.C. 1311, 1314, 1342, 1362 (EPA responsible for setting effluent limitations, and water quality standards, issuing National Pollution Discharge Elimination System permits, and prescribing necessary regulations); 33 U.S.C. 1344, 419 (Corps responsible for issuing dredge-and-fill permits and is authorized to prescribe regulations under Rivers and Harbors Act). See also *E.I. Dupont de Nemours & Co. v. Train*, 430 U.S. 112, 134, 97 S.Ct. 966, 978, 51 L.Ed.2d 204 (1977) (Supreme Court defers to EPA's interpretation of CWA because agency is charged with administering the Act, interpretation is reasonable and supported by scholarly opinion) (quoting *Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60, 87, 95 S.Ct. 1470, 1485-86, 43 L.Ed.2d 731 (1976) (deferring to EPA's interpretation of Clean Air Act)). While the methodology used in this case had been recently established, [Foot Note 26] the interpretation of the wetlands definition necessarily drew on the agencies' scientific expertise. The definition concerns

the scope of the CWA, and with it the scope of the federal government's ability to control the discharge of pollutants into the waters of the United States. The EPA and the Corps were in the best position to determine precisely what property must come under federal control in order to protect the nation's waters. [Foot Note. 27]

The Corps' 1975 regulations defined "fresh water wetlands" as "those areas that normally are characterized by the prevalence of vegetation that requires saturated soil conditions for growth and reproduction." 42 Fed.Reg. 37128 (Jul 19, 1977) (emphasis added). In 1977, the Corps revised its regulations to define "wetlands" as

The term "wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

33 C.F.R. 323.2(c) (1982) (emphasis added). The Corps explained that this revision was intended to eliminate several problems and to achieve certain results:

The reference to "periodic inundation" has been eliminated. Many interpreted that term as requiring inundation over a record period of years. Our intent under Section 404 is to regulate discharges of dredged or fill material into the aquatic system as it exists, and not as it may have existed over a record period of time. The new definition is designed to achieve this intent. It pertains to an existing wetland and requires that the area be inundated or saturated by water at a frequency and duration sufficient to support aquatic vegetation. This inundation or saturation may be caused by either surface water, ground water, or a combination of both.

The use of the word "normally" in the old definition generated a great deal of confusion. The term was included in the definitions to respond to those situations in which an individual would attempt to eliminate the permit review requirements of Section 404 by destroying the aquatic vegetation, and to those areas that are not aquatic but experience an abnormal presence of aquatic vegetation. Several such instances of destruction of aquatic vegetation in order to eliminate Section 404 jurisdiction actually have occurred. However, even if this destruction occurs, the area still remains as part of the overall aquatic system intended to be protected by the Section 404 program. Conversely, the abnormal presence of aquatic vegetation in a non-aquatic area would not be sufficient to include that area within the Section 404 Program.

We have responded to the concern for the vagueness of the term "normally" by replacing it with the phrase ". . . and that under normal circumstances to [sic] support" We do not intend, by this clarification, to assert jurisdiction over those areas that once were wetlands and part of an aquatic system, but which, in the past, have been transformed into dry land for various purposes.

Concerns were also expressed over the types and amount of vegetation that would be required to establish a "wetland" under this definition. We have again used the term "prevalence" to distinguish from those areas that have only occasional aquatic vegetation interspersed with upland or dry land vegetation.

At the same time, we have changed our description of the vegetation involved by focusing on vegetation "typically adapted for life in saturated soil conditions." The old definitions of "freshwater wetlands" provided a technical "loophole" by describing the vegetation as that which requires saturated soil conditions for growth and reproduction, thereby excluding many forms of truly aquatic vegetation that are prevalent in an inundated or saturated area, but that do not require saturated soil from a biological standpoint for their growth and reproduction. We intend to publish shortly vegetation guides to indicate the types of vegetation intended to be included in this definition, and to rely on the assistance of biologists, scientists and other technical experts from other Federal and State agencies to assist in delineating those wetland areas intended to be included in this definition.

42 Fed.Reg. 37128 (July 19, 1977).

Focusing on the Corps' statement in the preamble in the Federal Register to the effect that the section 404 program was "being revised to clarify many terms," 42 Fed.Reg. 37122 (July 19, 1977) (emphasis added), the private defendants maintain that the definitional change was intended to be minor. They emphasize that the Corps expressed an intent to include only "truly aquatic areas," listing "swamps, bogs, and marshes at the end of [the] definition to further clarify [its] intent," 42 Fed. Reg. 37129. They maintain that the facultative hydrophytes were never meant to be considered as wetland indicators.

The private defendants' analysis merely begs the question of what is a "truly aquatic area" within the Corps' definition, since "truly aquatic" is not defined in the regulations. While the list of "aquatic areas" at the end of the definition may give us some idea of its scope, that list is inclusive, not exclusive, and the terms "swamps, bogs and marshes" are also undefined. The obligate hydrophytes might be the only species able to survive in a "deep water swamp," but the definition clearly does not limit its scope to such permanently inundated areas.

The comments accompanying the promulgation of the 1977 regulations may be read to support the federal defendants' interpretation as easily as they may be read to support the landowners'. The comments explained that the Corps had "changed [its] description of the vegetation involved by focusing on vegetation typically adapted for life in saturated soil conditions." 42 Fed. Reg. 37128 (emphasis added). This "change" was designed to close a "technical loophole" [Foot Note 28] that had "excluded many forms of truly aquatic vegetation that are prevalent in an inundated or saturated area, but that do not require saturated soil from a biological standpoint for their growth and reproduction." *Id.* These statements suggest that the Corps fully intended to add certain previously excluded species to its list of wetland indicators.

We are equally unpersuaded that the federal defendants' position is in error by the landowners' parsing of the definition itself. The landowners would read the words "vegetation typically adapted for life in saturated soil conditions" as limiting the wetlands indicators to species able to survive their entire life cycle in saturated soils. The federal defendants argue that "typically adapted for life in" these soil conditions means the ability to live in such conditions, although some of the species may require relief at certain points in their life cycles. A reading of the entire definition indicates that the agencies' interpretation is the more reasonable, since wetlands are not limited to areas that are permanently inundated.

Finally, we agree with the federal defendants that the decision to analyze the soil and hydrology flows from the language of the definition. The definition speaks of areas that are inundated or saturated "at a frequency and duration sufficient to support" the wetland indicators. We fail to understand how the agency may determine whether a tract is such an area without examining its hydrology. Similarly, the definition provides that a wetland is an area that "under normal circumstances [does] support" vegetation typically adapted for life in "saturated soil conditions." It would seem that the logical method for determining whether this requirement is met is to examine whether the soil is or is likely to be frequently saturated. Regardless of whether the agency had engaged in an analysis of soil and hydrology in the past, no new burden not already contained in the definition was imposed on the landowner by this change in practice. See *Yale Broadcasting Co. v. FCC*, 478 F.2d 094, 595-96 (D.C.Cir.), cert. denied, 414 U.S. 914, 94 S.Ct. 211, 38 L.Ed.2d 152 (1973). Since we conclude that the agencies' interpretation of the wetlands definition is reasonable, we are required to respect it. *Udall*, supra. [Foot Note 29] A fortiori, we agree with the federal defendants that the methodology was not a significant alteration of the 1977 regulations, and therefore notice-and-comment procedures were not required.

3. Fairness.

There is an additional reason why we have concluded that the failure to engage in notice-and-comment procedures should not invalidate the EPA's final wetlands determination. As discussed above, in deciding whether such procedures are required, a court must keep in mind the underlying purpose of the APA: fairness to the affected parties. The landowners had, and took advantage of, the opportunity to argue about which species were wetlands indicators both at the administrative proceeding and at the trial. Further, while disclaiming the usefulness of the approach, Dr. Rhodes, on whose report the landowners rely heavily, conducted his own analysis of the Lake Long Tract's soil and hydrology conditions. Admin.Record, Tab 3.17. Therefore, the EPA's adoption of the methodology did not make the administrative proceedings less than fundamentally fair. Compare *Giles Lowery Stockyards*, supra (rulemaking not required for agency's adoption of method for computing livestock exchange rates where plaintiff was aware of agency's plan to use the methodology and had had an opportunity to build case around it; plaintiff's decision to use different method not relevant), with *Port Terminal*, supra (agency's rejection of plaintiff's cost studies on ground that studies failed to use specific formula unfair where agency had previously refused to standardize formula); *Hill v. Federal*

Power Commission, 335 F.2d 355 (5th Cir. 1964) (hearing unfair where standards applied had not evolved or been announced until agency decision held them unsatisfied).

We note further that even if we were to accept the landowners' contention that the methodology should have been adopted pursuant to notice-and-comment procedures, the same methodology would be required under the EPA's present regulations. In 1980, the EPA, in conjunction with the Corps, revised its regulations implementing the section 404 permit program. See 45 Ref. 85336 (Dec. 24, 1980). These revisions were made after notice in the Federal Register and a comment period. *Id.* The regulations require the permitting authority to examine the soil, the hydrology and the aquatic ecosystem to determine the effects of the proposed activity on the aquatic environment. 40 C.F.R. 230.11(a), (b), (c), .20, .21, .22. Section 230.41(a)(3) provides:

Wetland vegetation consists of plants that require saturated soils to survive (obligate wetland plants) as well as plants, including certain trees, that gain a competitive advantage over others because they can tolerate prolonged wet soil conditions and their competitors cannot. In addition to plant populations and communities, wetlands are delimited by hydrological and physical characteristics of the environment. These characteristics should be considered when information about them is needed to supplement information available about vegetation, or where wetland vegetation has been removed or is dormant.

40 C.F.R. 230.41(a)(3) (1982). Since an appellate court must apply the agency's current regulations, *Thorpe v. Housing Authority*, 393 U.S. 268, 282, 89 S.Ct. 518, 526, 21 L.Ed.2d 474 (1969); *Florida Power Light Co. v. Costle*, 650 F.2d 579, 590 (5th Cir.1981), the most that we could do would be to remand for reconsideration under the new regulations. See *Florida Power & Light*, *supra*; *Port Terminal*, *supra* (permitting agency to apply new standards on remand as long as plaintiff is given opportunity to present additional evidence). Here, there is no reason for a remand because the landowners have already had an adequate opportunity to present their evidence under the "new" regulations.

4. The Regulations and the Clean Water Act.

Having determined that the federal defendants' interpretation is consistent with the Corps' wetlands definition, we must consider whether the definition is consistent with the statute and the Constitution. Again in reviewing the statutory question, we must keep in mind the principle that an agency's interpretation of the statute that it administers is to be accorded significant deference. *Ford Motor*, *supra*; *Quarles*, *supra*. We conclude that the federal defendants' interpretation of this "complex" statute is sufficiently reasonable to preclude us from substituting our judgement for the agencies'. See *DuPont*, *supra*, 430 U.S. at 134, 97 S.Ct. at 978; *Natural Resources Defense Council*, *supra*, 421 U.S. at 87, 95 S.Ct. at 1485.

As the district court recognized, Congress had lofty goals in enacting the CWA: "The objective of this chapter is to restore and maintain the chemical and biological integrity of

the Nation's waters." 33 U.S.C. 1251(a) (1976). Congress expressly stated its intent "that the term 'navigable waters' be given the broadest possible constitutional interpretation . . . " 1 Legislative History, at 178 (Senate consideration of the Conference Report on S. 2770, Oct. 4, 1972); see also 1 Legislative History, at 250-51 (House Consideration of same, Oct. 4, 1972). [Foot Note 30] The report of the Senate Committee on Public Works submitted with S. 2770 explained the need for a broad definition of "navigable waters" in order to control the discharge of pollution at its source:

The control strategy of the Act extends to navigable waters. The definition of this term means the navigable waters of the United States, portions thereof, and includes the territorial seas and the Great Lakes. Through narrow interpretation of the definition of interstate waters the implementation [of the] 1965 Act was severely limited. Water moves in hydrological cycles and it is essential that discharge of pollutants be controlled at the source. Therefore, reference to the control requirements must be made to the navigable waters, portions thereof, and their tributaries.

2 Legislative History, at 1495 (emphasis added); see also *Leslie Salt Co. v. Froehlke*, 578 F.2d 742 (9th Cir.1978).

Attempts by the House to limit the statute's reach to waters that were in fact navigable were rejected in 1977. See 3 Legislative History, at 281 (H.Conf.Rep. No. 830). [Foot Note 31] When Congress rejected the attempts to limit the Corps' jurisdiction in 1977, it was well aware of the extension of that jurisdiction beyond the traditional definition of "navigable waters," as well as the Corps' proposed revision of its wetlands definition. [Foot Note 32] See 4 Legislative History, at 920-22 (statement of Sen. Baker during Senate debate over Bentsen amendment, August 4, 1977); 3 Legislative History, at 347-48 (statement of Rep. Roberts, member of Conference Committee, during House debate, December 15, 1977). In fact, Congress repeatedly recognized the importance of protecting wetlands if the nation was to realize the statutory goal of restoring the chemical and biological integrity of the nation's waters. Senator Muskie, one of the primary sponsors of the CWA, explained:

There has been considerable discussion of the provisions of section 404 of the act, much of which has been related to the suspicions and fears with respect to that section, and little of which has been related to substantive solutions to real problems while providing an adequate regulatory effort to assure some degree of wetlands protection. There is no question that the systematic destruction of the Nation's wetlands is causing serious, permanent ecological damage. The wetlands and bays, estuaries and deltas are the Nation's most biologically active areas. They represent a principal source of food supply. They are the spawning grounds for much of the fish and shellfish which populate the oceans, and they are passages for numerous upland game fish. They also provide nesting areas for a myriad of species of birds and wildlife.

The unregulated destruction of these areas is a matter which needs to be corrected and which implementation of section 404 has attempted to achieve.

4 Legislative History, at 869 (remarks of Sen. Muskie during Senate debate on S. 1952, Aug. 4, 1977).

While there were statements during the 1972 deliberations to the effect that the CWA was not intended to extend beyond currently navigable waters, 1 Legislative History, at 178, 250 (statements of Sen. Muskie and Rep. Dingell), those statements were rendered virtually meaningless by Congress' refusal to restrict the definition in 1977. The EPA and the Corps expanded the wetlands definition in order to control "the discharge of pollutants at the source." We cannot say that the EPA's application of the definition to areas, like the Lake Long Tract, which experience significant flooding during a substantial portion of the year and serve as major overflow or backwater areas for the nation's rivers, or its conclusion that the discharge of pollution into such areas would have a significant effect on the nation's waters, was an unreasonable application of the statute. The EPA's decision is therefore entitled to our respect.

5. Constitutional Challenges to the Corps' Definition.

The landowners also contend that if the CWA authorizes regulation to the extent proposed by the federal defendants, then the Act is unconstitutionally vague and an unlawful delegation of legislative power.[Foot Note 33] We find no merit in either claim.

The federal Constitution provides that "[A]ll legislative powers herein granted shall be vested in Congress." U.S.Const. art. 1, 1. While Congress is not permitted to "abdicate or transfer to others the essential legislative functions with which it is vested," it may authorize other bodies to determine specific facts and may also establish general standards and delegate to others the responsibility for effectuating the legislative policy. *Schechter Corp. v. United States*, 295 U.S. 495, 529-30, 55 S.Ct. 837, 842-43, 79 L.Ed. 1570 (1935); accord *Panama Refining Co. v. Rvan*, 293 U.S. 388, 421, 55 S.Ct. 241, 248-49, 79 L.Ed. 446 (1935); *United States v. Gordon*, 580 F.2d 827, 839 (5th Cir.), cert. denied, 439 U.S. 1051, 99 S.Ct. 731, 58 L.Ed.2d 711 (1978). In considering an attack on a congressional delegation, our task is to determine whether the standards set forth by Congress are "sufficiently definite in light of the complexity of the area at which the legislation is directed." *Gordon*, *supra* (citing *Carlson v. Landon*, 342 U.S. 524, 542, 544, 72 S.Ct. 525, 535, 536, 96 L.Ed. 547 (1952)).

The CWA's delegation of authority to the EPA and the Corps clearly meets this test. Congress' goal--the restoration of the integrity of the nation's waters and the elimination of discharges of pollutants into those waters--is succinctly set forth in 33 U.S.C. 1251(a). The agencies' jurisdiction under the CWA extends to all "waters of the United States," and the 1977 regulation provides specific criteria further defining the statutory term. In reviewing an application for a dredge-and-fill permit, the agencies are to consider any "unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding wells), wildlife, or recreational areas," 33 U.S.C. 1344(c), and the effect of the "disposal of pollutants on human health or welfare, . . . marine life, . . . esthetic, recreation and economic values ... [and] the persistence and

permanence of [these] effects. . . ." 33 U.S.C. 1343(c)(1)(A)-(D). This is not the kind of standardless discretion condemned in *Schechter*, *supra*.

The landowners' vagueness challenge is really just the other side of their delegation challenge. We cannot agree that the application of the Corps' wetlands definition in this case is so vague as to deprive the landowners of notice that they may be subject to civil and criminal penalties. Indeed, at this point the vagueness claim is based on pure speculation, since the landowners have not been subjected to either civil or criminal penalties. At the commencement of these proceedings, the landowners were well aware that at least a significant portion of their land was a wetland; if they wished to protect themselves from liability they could have applied for a permit and thus obtained a precise delineation of the extent of the wetland, as well as the activities permissible on the land. See *United States v. Byrd*, 609 F.2d 1204, 1209 (7th Cir.1979) (upholding grant of summary judgment and permanent injunction to the government and noting that landowner could protect himself from civil and criminal liability by seeking a permit that would set forth the extent of the wetlands on his property). In *United States v. Phelps Dodge Corp.*, 391 F.Supp. 1181 (D.Ariz. 1975), the district court rejected a vagueness challenge to the application of the CWA to "normally dry arroyos" in a criminal proceeding, a circumstance counseling far greater concern for vagueness than this. We are unpersuaded that the Corps' wetlands definition failed to give the landowners notice of their potential liability in this case.

6. The Merits of the EPA's Wetlands Determination.

The essence of the landowners' challenge to the EPA's final wetlands determination concerned the legal issues described above, in particular the use of the new methodology. To a limited extent, the landowners have also disputed some of the agency's factual findings. Our review of the administrative record in this case does not indicate that the EPA's findings were arbitrary or capricious.

While the EPA found that approximately eighty percent of the Lake Long Tract was a wetland, the district court found that over ninety percent of the tract was a wetland. The court and the agency reached different conclusions because they held differing beliefs about whether Tensas and Dundee soils were wetlands soils. The EPA's conclusion that areas made up of these two soils should be excluded from the wetlands area was based on the report of the agency's soil expert, Dr. William H. Patrick, Jr. Dr. Patrick examined the site's soils for wetness, texture, color and extent of mottling and concluded that the Dundee and Tensas soils were less likely to remain saturated than the other wetlands soils. See Admin.Record, Tab 3.19. The district Court found that all of these soils were wetlands soils because they drain poorly.

While there may have been room for a difference in opinion about the nature of these soils, such a difference does not mean that the agency's decision was arbitrary or capricious. The agency and its expert explained their reasons for concluding that the Dundee and Tensas soils were not wetlands, and their decision is not irrational. Since the

courts may not require any more than that, Overton Park, supra, the district court erred in substituting its judgment about the character of the soils for the agency's.

The landowners emphasize that the EPA's determination that approximately eighty percent of the tract was a wetland does not correspond to the findings of any of its experts. [Foot Note 34] In discussing percentages, it is all too easy to lose sight of the fact that we are discussing the characteristics of land, not the amount of octane required in gasoline or the amount of lead permitted in drainage pipes. We must not forget that these percentages are a mere shorthand for the map of wetlands that our pens and tongues cannot adequately describe.

The eighty-percent figure is based on Dr. Patrick's report about the area's soils. He opined that sixty percent of the tract was a wetland because he would have excluded from his calculations the Tensas-Sharkey soils, which he viewed as mixed and nonmixed wetlands soils, as well as the Dundee and Tensas soils. Admin.Record, Tab 3.19. The EPA decided not to exclude the Tensas-Sharkey soils because it was too difficult to separate these soils from the wetlands soils. Final Wetlands Determination at 6-7, 2 Record at 377-78; Admin.Record, Tab 3.38 (EPA Regional Administrator's Report). Since the Tensas-Sharkey soils accounted for approximately twenty percent of the tract, their inclusion explains the difference between the EPA's determination and its expert's.

Finally, the landowners dispute the EPA's findings with respect to which types of vegetation were wetlands indicators and the extent of the inundation of the tract. [Foot Note 35] The vegetation dispute concerns whether the facultative hydrophytes should be considered wetlands indicators, not which types of vegetation were actually on the tract. We have already determined that the EPA's view of the matter was not irrational. While there were conflicting reports about the extent of flooding on the tract, both in the administrative record and at trial, this conflict was properly resolved by the agency. [Foot Note 36]

In summary, we hold that the EPA's final wetlands determination was not arbitrary or capricious. Therefore, the district court's determination must be set aside to the extent that it is in conflict with the agency's, and the agency's determination should be reinstated.

III. ACTIVITIES REQUIRING A PERMIT.

We note at the outset of our discussion of the landclearing activities in this case that the litigation over this issue has not proceeded in the most desirable fashion. At oral argument, we asked the federal defendants why they were not claiming that their determination of which activities would require a permit should be subject to the same standard of review as the wetlands determination. Their counsel responded that the same standard probably should have applied, but he suspected that the issue had not been raised below.

Our own review of the record indicates that the federal defendants did suggest that the entire wetlands determination should have been reviewed under the arbitrary and

capricious standard, 2 Record at 548, but they admitted that the EPA's activities determination had not been as carefully considered as the wetlands determination:

While the determination heretofore made is ample to support a finding by the court that most of the area in question is a wetland, and to support a conclusion that some of the nonfederal defendants' actions will involve the discharges of dredged or fill material, the activities determination was not based upon a full development of all relevant facts that would normally take place in a permit procedure.

2 Record at 551 (emphasis in original). The federal defendants then asked the court to allow the Corps to exercise its "primary jurisdiction" over which activities should be permitted on the wetlands by directing the private defendants to apply for a permit rather than proceeding to trial:

In light of the complex situation in this case, federal defendants suggest that the initial determination in this case of the essentially factual issues of whether or not there will be discharges of dredged or fill material and what the effects thereof will be on the reach and flow and circulation of navigable waters, be made through the permit process instituted by Congress for that purpose, and thereafter the case would be ripe for judicial review.

Id. (emphasis in original).

The judge-made doctrine of primary jurisdiction is "concerned with promoting proper relationships between the courts and administrative agencies charged with particular regulatory duties." *United States v. Western Pacific Railroad*, 352 U.S. 59, 63, 77 S.Ct. 161, 166, 1 L.Ed.2d 126 (1956). It applies where a claim is "originally cognizable in the courts," but where "enforcement of the claim requires the resolution of issues which, under a regulatory scheme, have been placed within the special competence of an administrative body; in such a case the judicial process is suspended pending referral of such issues to the administrative body for its views." *Id.* at 64, 77 S.Ct. at 165. Application of the doctrine is particularly appropriate where uniformity of certain types of administrative decisions is desirable, or where there is a need for the "expert and specialized knowledge of the agencies." *Id.*; see also *Southwestern Sugar & Molasses Co. v. River Terminals Corp.*, 360 U.S. 411, 420, 79 S.Ct. 1210, 1216, 3 L.Ed. 2d 1334 (1959); *Far East Conference v. United States*, 342 U.S. 570, 574-75, 72 S.Ct. 492, 494-95, 96 L.Ed. 576 (1952).

The district court might have been well advised to agree to the federal defendants' request that the Corps be allowed to make the initial determination about which activities should be permitted on the Lake Long Tract. Compare *Deltona Corp. v. Alexander*, 682 F.2d 888, 893-94 (11th Cir.1982) (upholding summary judgment in Corps' favor where Corps had not yet had opportunity to make initial determination of extent of wetlands); *Montgomery Environmental Coalition Citizens Coordinating Committee v. Washington Suburban Sanitary Commission*, 607 F.2d 378, 381 (D.C.Cir.1979) (upholding dismissal of action seeking to enjoin defendants from exceeding sewage treatment guidelines where EPA proceeding was pending, since EPA had primary jurisdiction over issuance of

section 402 permits); and *Alton Box Board Co. v. EPA*, 592 F.2d 395, 399 n. 7 (7th Cir.1979) (court may order EPA to afford plaintiff a hearing but not to issue a permit because doctrine of primary jurisdiction requires initial agency determination), with *Susquehanna Valley Alliance v. Three Mile Island*, 619 F.2d 231, 244-45 (3d Cir. 1980), cert. denied, 449 U.S. 1096 101 S.Ct. 893, 66 L.Ed.2d 824 (1981) (primary jurisdiction requires exhaustion of administrative remedies under Atomic Energy Act but not under CWA); *Asarco, Inc. v. EPA*, 578 F.2d 319, 321 n. 1 (D.C.Cir.1978) (dismissal of intervenors claim for failure to exhaust not required where the agency failed to insist upon exhaustion, statutory interpretation issues were within court's competence, and plaintiff and intervenor raised essentially same question); and *O'Leary v. Moyer's Landfill Inc.*, 523 F.Supp. 642, 646-47 (E.D.Pa. 1981) (primary jurisdiction does not require sending case to state environmental agency where complaint is that agency has been ineffective and issues are within court's competence). As the federal defendants predicted, the district court took extensive evidence about the nature and effects of the landowners' activities, only to conclude that a dredge-and-fill permit was indeed required. Should the landowners now wish to proceed with their activities, they must apply to the Corps for a permit, at which point the Corps will be forced to consider the same evidence in order to determine whether a permit should issue. An initial determination by the Corps might have obviated the need for addressing some of the issues discussed in the district court's opinion and presently urged on appeal. [Foot Note 37] Further, if the Corps ultimately issues the permit, we will be faced with yet another round of appeals challenging the agency's determination.

Regardless of whether it might have been advisable to allow the Corps to make the initial determination in this case, the federal defendants have abandoned their primary jurisdiction claim on appeal, perhaps because they are satisfied with most of the district court's conclusions. The District of Columbia Circuit faced the converse of this situation in *Natural Resources Defense Council, Inc v. Train*, 510 F.2d 692 (D.C.Cir. 1975). While rejecting the EPA's argument that the notice provision of section 505(b)(2) was a jurisdictional prerequisite to a citizen's suit under the CWA, 33 U.S.C. 1365(b)(2), the Natural Resources court suggested that courts might "properly give effect to the salutary purposes underlying the notice provision by resort to familiar doctrines such as those underpinning the requirements of exhaustion of administrative remedies." 510 F.2d at 703. The court explained:

The notice provision was designed to obviate the need for judicial recourse by affording the agency the "opportunity to act on the alleged violation." Sound discretion bids a court stay its hand upon petition by the Administrator where it has reason to believe that further agency consideration may resolve the dispute and obviate the need for further judicial action.

Id. (footnote omitted). It was unwilling, however, to require exhaustion when the issue had been raised for the first time on appeal, there was no evidence that the agency desired to reassess its plans, and the "course of the present action clearly indicate[d] that the agency's position with regard to its discretion under [section 304(b)(1)(A)] was] firmly rooted." *Id.*

Here, the primary jurisdiction question has been abandoned, instead of being raised for the first time, on appeal. While the agencies' position has been anything but "firmly rooted" during the course of this action, they appear to have finally determined which of the private defendants' land-clearing activities should not be conducted without a section 404 permit. We note further that the agencies participated fully in the trial below, and thus the district court had the benefit of their views on the activities issue. See *United States v. Rohm & Hass Co.*, 500 F.2d 167, 175 (5th Cir.1974), cert. denied, 420 U.S. 962, 95 S.Ct. 1352, 43 L.Ed.2d 439 (1975) (primary jurisdiction not necessary where agency had participated extensively in litigation). Under these circumstances, we believe that no purpose would be served by vacating the district court's decision and remanding to the agency for the "initial determination."

We turn then to our consideration of whether the district court's conclusion that the private defendants' landclearing activities required a section 404 permit was correct. In reviewing the trial court's decision, we are bound by the traditional standard requiring us to uphold a trial court's factual findings unless they are clearly erroneous. Fed.R.Civ.P. 52(a). Of course, we are free to make our own independent assessment of the court's legal conclusions. *Sierra Club v. Sigler*, 695 F.2d 957, 967-68 (5th Cir.1983).

A. Factual Findings.

The district court found that the landowners had engaged in the following activities:

Initially, bulldozers outfitted with shearing blades cut the timber and vegetation at or just above ground level. The shearing blades were v-shaped, had a serrated edge and flat bottom and were approximately 18-20 feet in length. The blades were adjusted to be free floating so that they would ride along the top surface of the ground. Occasionally, however, the blades would gouge the surface of the ground. Although the blades were adjusted to ride on the ground's surface, they did scrape the leaf litter and humus that overlaid the soil as they moved from tree to tree.

After the shearing was completed in a section, bulldozers outfitted with rake blades pushed the felled trees into windrows. The upper portion of the raking blade was solid whereas the lower portion had tines that permitted soil to pass through the openings. The raking blades were also outfitted so that they generally operated on top of the soil. However, in the process of windrowing the trees and debris, soil and leaf litter was also scraped into the windrows. It is not clear whether the blades themselves or the broom-like action of the trees and brush that they were pushing actually scraped the soil and the overlying leaf litter. In any event the photographic evidence clearly demonstrated that soil and leaf litter was piled up during the windrowing process--this movement filled in low areas and along with the discing which followed, had a leveling effect on the surface of the land.

The trees and other vegetation that had been windrowed were then burned. The remaining ashes were later disced into and across the tract. Some of the felled trees and other debris

would not burn. This material was buried in four or five pits, each approximately 50 feet long and 6 feet deep that had been dug with backhoes by the private defendants.

Tractors pulling chunk rakes would go over the areas that had been sheared and windrowed and rake together any remaining debris. Basically, the chunk rakes were sets of tines that were outfitted on cultivators that had had their blades removed. The chunk rakes gathered the small debris into piles where it was presumably burned. These ashes were also disced into the soil.

After the shearing, windrowing and chunk raking the land was disced to prepare it for soybean cultivation. A disc is a bowl-shaped blade that cuts into the ground and fluffs the soil up. The disc's [sic] used on this tract were 24 inches in diameter and would cut into the ground approximately 9 inches. During discing, some soil would ride in front of the disc and would be redeposited in other areas of the tract, resulting in substantial displacement and redepositing of the soil itself.

Defendants also dug a drainage ditch that was approximately three quarters of a mile long. The earth excavated from the ditch was piled alongside the ditch and was to be spread over the adjacent area. Construction of at least four or five miles of additional ditches were contemplated for soybean cultivation.

Avoyelles Sportsmen's League v. Alexander (Avoyelles I), 473 F.Supp. 525, 528-29 (W.D. La.1979) (footnote omitted).

The private defendants are the only parties who challenge the district court's factual findings. While they have indicated portions of the record that support their contention that the landclearing activities did not result in any significant digging up of the earth or leveling of the land, [Foot Note 38] the plaintiffs presented their own eyewitness testimony to the effect that large chunks of earth had been torn up, holes dug, and sloughs filled in. [Foot Note 39] Resolution of this conflict in the evidence is properly left to the district court, who has had an opportunity to hear and observe the witnesses. We cannot say on the basis of this record the trial court's factual findings were clearly erroneous.

B. The Discharge of Pollutants.

The district court held that the private defendants' landclearing activities constituted a "discharge of a pollutant" into the waters of the United States, and that engaging in those activities without a section 404 dredge-and-fill permit was a violation of section 301(a) of the CWA. 33 U.S.C. 1311(a). As the district court did, we must look beyond section 301(a) itself to the statutory and regulatory definitions in order to determine whether the district court's holding was correct.

Section 502(12) defines the term "discharge of a pollutant" as "(a) any addition of any pollutant to navigable waters from any point source . . ." 33 U.S.C. 1362(12). A "point source" is defined in section 502(14) as "any discernible, confined and discrete conveyance, including but not limited to any container, rolling stock, concentrated

animal feeding operation, or vessel ... from which pollutants are or may be discharged...." 33 U.S.C. 1362(14). Section 502(6) defines the term "pollutant" to mean "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water." 33 U.S.C. 1362(6). The question in this case is whether the landclearing activities were (1) a discharge (2) of a pollutant (3) from a point source (4) into navigable waters. Further, we must determine whether the activities were "normal agricultural activities" exempted from the permit requirements by 33 C.F.R. section 1344(f).

As discussed in Part II, these activities did occur in navigable waters, as that term is defined in the statute. Further, We agree with the district court that the bulldozers and backhoes were "point sources," since they collected into windrows and piles material that may ultimately have found its way back into the waters. See *Sierra Club v. Abston Construction Co.*, 620 F.2d 41 (5th Cir.1980) (mining scrap piles may be point sources even though material may not be carried directly to waters from the piles); *United States v. Holland*, 373 F.Supp. 665, 668 (M.D.Fla.1974) (bulldozers are point sources). The question then is whether these activities constituted a "discharge" of a "pollutant."

Emphasizing that the removal of all of the vegetation would destroy the vital ecological function of the wetlands, the district court concluded that the landclearing activities constituted a "discharge" within the meaning of the CWA. Both the federal and private defendants argue that the "mere removal" of wetlands vegetation was not a discharge because the term discharge is defined as the "addition" of pollutants, not the removal of materials. The district court rejected this argument as "untenable" because it believed that the federal defendants' interpretation would frustrate the ecological purposes of the CWA. 473 F.Supp. at 536. In the court's view, the federal defendants' argument implied that "the excavation of [a] ditch 6 feet deep and 100 feet long requires a 404 permit (is destructive of wetlands) but that the clearing of 20,000 acres of forest wetlands by methods involving only de minimis movement of earth does not (is not destructive of wetlands)." *Id.*

The District of Columbia Circuit recently reversed a district court's decision where the lower court had rejected the EPA's view that section 402 of the CWA only covered the addition of pollutants. *National Wildlife Federation v. Gorsuch*, 693 F.2d 156 (D.C.Cir.1982). Like the district court here, the trial court in *National Wildlife* found that the EPA's "'overly literal and technical' construction was the 'more tortured' and .. less consonant with Congress' zero-discharge goal." 693 F.2d at 166. As an initial matter, the court of appeals held that the district court had failed to give enough deference to the EPA's construction of the Act. 693 F.2d at 166-67 (citing *EPA v. National Crushed Stone Association*, 449 U.S. 64, 83, 101 S.Ct. 295, 307, 66 L.Ed.2d 268 (1980)). Besides the fact that Congress had "given the EPA substantial discretion in administering" the CWA, the court of appeals noted that the agency's construction had been "made contemporaneously with the passage of the Act, and ha[d] been consistently adhered to since." 693 F.2d at 107. The court of appeals then went on to note that the district court

had "paid too much attention to the broad stated purposes of the Act, and too little attention to the legislative history that must inform its view of those purposes." *Id.* at 171. Finally, noting that regulation by the states of dam-induced pollution was provided for in section 208, 33 U.S.C. section 1218, the National Wildlife court concluded that the EPA's interpretation of the statute was reasonable and therefore it must be respected. See also *Missouri ex rel. Ashcroft v. Department of the Army*, 672 F.2d 1297, 1304 (8th Cir. 1982) (district court did not err in holding that operation of dam did not result in discharge of pollutant as discharge requires "addition" of pollutant from "point source" and neither term applied to soil erosion or oxygen content of water).

A brief analysis of the district court's factual findings indicates that the dispute about whether the CWA covers the mere removal of vegetation is a false issue in this case. The EPA has explained on appeal that it agrees with the district court that "if vegetation or other materials are redeposited in the wetland, that activity is a discharge. [Their] point of disagreement with the district court was with its apparent conclusion that removal activities [were] covered by the Act even when nothing is redeposited on the land." Federal Defendants' Reply Brief at 2 n. 1. [Foot Note 40] The district court's factual findings demonstrate that this is not a "mere removal" case. The court found that "during the clearing process small sloughs were filled in and larger ones partially filled thereby leveling the land." 473 F.Supp. at 536. The landowners' own witness admitted to burying logs in holes that he had dug, and the plaintiffs' witnesses testified that material that would not burn was buried. Since the landclearing activities involved the redeposit of materials, rather than their mere removal, we need not determine today whether mere removal may constitute a discharge under the CWA. [Foot Note 41] Any suggestion made by the district court that the "discharge" does cover removal is pure dicta.

The word "addition," as used in the definition of the term "discharge," may reasonably be understood to include "redeposit." As the district court recognized, this reading of the definition is consistent with both the purposes and legislative history of the statute. The CWA was designed to "restore and maintain the chemical, physical and biological integrity of the Nation's waters," 33 U.S.C. 1251(a), and as discussed in Part II, the legislative history indicates that Congress recognized the importance of protecting wetlands as a means of reaching the statutory goals. See, e.g., 3 Legislative History, at 869 (remarks of Sen. Muskie) (quoted by the district court, 473 F.Supp. at 536). There is ample evidence in the record to support the district court's conclusion that the landowners' redepositing activities would significantly alter the character of the wetlands and limit the vital ecological functions served by the tract. [Foot Note 42] Since we have concluded that the term "discharge" covers the redepositing of materials taken from the wetlands, we hold that the district court correctly decided that that landclearing activities on the Lake Long Tract constituted a discharge within the meaning of the Act. [Foot Note 43]

Similarly, we agree with the district court, the plaintiffs and the federal defendants that the material discharged in this case was "fill," if not "dredged," material and hence subject to the Corps' regulation under section 404, as long as the activities did not fall

within the section 404(f) exemption. The term "fill material" is defined in the Corps' regulations as

any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a waterbody. The term does not include any pollutant discharged into the water primarily to dispose of waste, as that activity is regulated under Section 402 of the Federal Water Pollution Control Act Amendments of 1972.

33 C.F.R. 323.2(m). The regulations define the "discharge of fill material" as

the addition of fill material into waters of the United States. The term generally includes, without limitation, the following activities: Placement of fill that is necessary to the construction of any structure in a water of the United States; the building of any structure or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; dams and dikes; artificial islands; property protection and/or reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for structures such as sewage treatment facilities, intake and outfall pipes associated with power plants and subaqueous utility lines; and artificial reefs. The term does not include plowing, cultivating, seeding and harvesting for the production of food, fiber, and forest products.

33 C.F.R. 323.2(n).

As discussed above, the burying of the unburned material' as well as the discing, had the effect of filling in the sloughs on the tract and leveling the land. The landowners insist that any leveling was "incidental" to their clearing activities and therefore the material was not deposited for the "primary purpose" of changing the character of the land. The district court found, however, that there had been significant leveling. The plaintiffs' witnesses testified that sloughs that had contained rainwater in the past had been filled in; thus, the activities were "changing the bottom elevation of the waterbody." Certainly, the activities were designed to "replace the aquatic area with dry land." Accordingly, we hold that the district court correctly concluded that the landowners were discharging "fill material" into the wetlands.

The district court also found that removal of the vegetation constituted dredging. The regulations define "dredged material" as "material that is excavated or dredged from waters of the United States." 33 C.F.R. 323.2(k). The district court reasoned that since the vegetation was part of the wetlands, it was also part of the "waters of the United States;" therefore, removal of the vegetation constituted dredging.

The landowners emphasize that dredging is "excavation." They argue that the vegetation is a wetland indicator, not a part of the wetland itself; therefore, the removal of the vegetation from the surface of the wetland is not "dredging." The federal defendants agree with the landowners that the removal of vegetation from above ground is not dredging, but they do not view this as a crucial issue in this case because they agree with

the district court that the landowners were discharging "fill material." Federal Defendants' Brief at 19 n. 17. We note that there was testimony that the landowners' activities included the digging of ditches and holes, which would constitute "dredging" even under the landowners' interpretation of the regulation. Like the federal defendants, however, we do not believe that a decision whether there was a discharge of dredged material is necessary here, since we have concluded that there was a discharge of fill material.

C. Statutory Exemptions.

Finally, the private defendants argue that their activities are normal farming activities exempt under section 404(f) of the Act. 33 U.S.C. 1344(f) (Supp. V 1981). Section 404(f)(1) exempts from the permit requirements:

(f)(1) Except as provided in paragraph (2) of this subsection, the discharge of dredged or fill material-

(A) from normal farming, silviculture, and ranching activities such as plowing, seeding, cultivating, minor drainage, harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices.

33 U.S.C. 1344(f)(1)(A). The Corps' regulations further implement this limitation by excluding "plowing, cultivating, feeding and harvesting for the production of food, fiber and forest products" from the definitions of a discharge of dredged or fill material. 33 C.F.R. 323.2(1), (n). While the private defendants' landclearing activities are not those specified in the Act, the defendants insist that the activities are nonetheless "normal" farming practices that should fall within the exemption.

The district court believed that the section 404(f)(1) exemptions were limited to "ongoing" agricultural activities. It reasoned that the word "'normal' connote[d] an established and continuing activity," and that the activities set out as examples in section 404(f)(1)(A) were the kinds of activities that would "only occur on a continuing basis as part of an ongoing farming or forestry operation." *Avoyelles I*, 473 F.Supp. at 535. [Foot Note 44] Because "no farming operation was or could have been contemplated [on the Lake Long Tract] until after the acreage had been cleared," the district court concluded that the activities in this case were not "normal farming activities." *Id.* It added that this conclusion was "buttressed" by the fact that "section 404(f)(2) specifically takes away the exemption for activities that involve changing the use of the land." *Id.* Since we agree with the district court that section 404(f)(2) precludes applying the "normal farming activities" exemption in this case, we affirm the district court's decision on that basis. [Foot Note 45]

Section 404(f)(2) takes away at least some of the exemptions arguably provided by section 404(f)(1):

(2) Any discharge of dredged or fill material into the navigable waters incidental to any activity having as its purpose bringing an area of the navigable waters into a use to which it was not previously subject, where the flow or circulation of navigable waters may be

impaired or the reach of such waters be reduced, shall be required to have a permit under this section.

33 U.S.C. 1344(f)(2). Read together, the two parts of section 404(f) provide a narrow exemption for agricultural and silvicultural activities that have little or no adverse effect on the nation's waters. This is precisely what Congress intended in enacting the amendment. During the Senate debates on the 1977 amendments, Senator Muskie, one of the primary sponsors of the CWA, explained:

New subsection 404(f) provides that Federal permits will not be required for those narrowly defined activities that cause little or no adverse effects either individually or cumulatively. While it is understood that some of these activities may necessarily result in incidental filling and minor harm to aquatic resources, the exemptions do not apply to discharges that convert extensive areas of water into dry land or impede circulation or reduce the reach or size of the water body.

3 Legislative History, at 474. As the district court opinion ably demonstrates, the purpose and effect of the landclearing activities on the Lake Long Tract was to bring "an area of the navigable waters into a use to which it was not previously subject." 33 U.S.C. 1344(f)(2). All of the vegetation was cut down, the land leveled, and at least one ditch dug to increase drainage so that the property could be changed from a forest to a soybean field. These changes can hardly be viewed as having a minimal adverse effect on the wetlands. [Foot Note 46] Accordingly, we hold that the district court was correct in concluding that the landclearing activities in this case were not exempt farming activities under section 404(f)(1)

Since, as we have observed, additional litigation could ensue from the Corps' section 404 permit determinations, however, a word of caution seems appropriate. Our partial affirmance of the district court's decisions on permanent injunction is based upon the same total activities approach used by the district court. That court did not make a tract-by-tract determination of what precise activities were observed in each area of the lands involved, nor does the district court's opinion disclose the precise location of the lands previously cleared, on which permits are required only for construction of dikes, levees or major drainage projects. If a section 404 permit application is filed on any part of the lands covered by the district court's injunction, the Corps should be free to apply its expertise to that permit determination without any constraint from the district court's injunctive determinations except those we have expressly affirmed, i.e., (1) that the bulldozers and backhoes are "point sources" within the meaning of the CWA; (2) that the filling in of the sloughs and leveling of the land resulted in the redepositing of fill material into the waters of the United States and was therefore a "discharge of a pollutant;" and (3) that the landclearing activities observed on the land thus far were not exempt from the Corps' section 404 permit requirements because those activities constituted a change in use of the wetlands.

IV. OTHER CLAIMS.

A. Taking Without Just Compensation.

The private defendants claim that a determination that the Lake Long Tract is a wetland subject to the Corps' regulation constitutes a "taking" for which just compensation must be paid under the fifth amendment. [Foot Note 47] The district court rejected this claim because it had not been shown that enforcement of the CWA was not "reasonable, legitimate and in the public interest." *Avoyelles II*, 511 F.Supp. at 287. See, e.g., *Andrus v. Allard*, 444 U.S. 51, 100 S.Ct. 318, 62 L.Ed.2d 210 (1979); *Penn Central Transportation Co. v. New York City*, 438 U.S. 104, 123, 98 S.Ct. 2646, 2659, 57 L.Ed.2d 631 (1978); *Deltona Corp. v. United States*, 657 F.2d 1184 (Ct.Cl.1981), cert. denied, 455 U.S. 1017, 102 S.Ct. 1712, 72 L.Ed.2d 135 (1982). While we agree with the district court that there has as yet been no taking, we hold that the claim should have been dismissed because it was premature.

Like the landowners here, the defendant landowner in *United States v. Byrd*, 609 F.2d 1204 (7th Cir.1979), argued that the requirement that he obtain a permit was tantamount to a taking of his property without compensation and therefore an illegal expropriation in violation of the fifth amendment. Rejecting this argument, the Seventh Circuit noted that Byrd

assume[d] a taking that may never take place. If Byrd applies for a permit and the Corps then issues it, Byrd will have no further complaint. If the Corps denies the permit application, the reasons therefore must be disclosed, and Byrd may seek judicial relief, if warranted.

609 F.2d at 1211. The Byrd court then held that the landowner should save his complaint until he had complied with the Corps' permit procedure. See also *Allain-Lebreton Co. v. Department of the Army*, 670 F.2d 43 (5th Cir.1982) (since Corps' rejection of plaintiff's land as a site for flood control levee because land enclosed a tract of wetlands was not a taking, and in fact was a refusal to take, there was no case or controversy and complaint was properly dismissed). Since there has as yet been no determination whether the landowners may put their property to the uses that they desire, we hold that the consideration of their taking claim should have been delayed until after they had complied with the Corps' permit procedure.

B. Intervention of Louisiana Department of Agriculture.

Louisiana was represented as an intervenor in the proceedings below by its Department of Natural Resources. After final judgment was entered, the Department of Natural Resources sought and obtained an extension of the time for it to take an appeal. In the meantime, the State decided that it wanted to be represented on appeal by the Department of Agriculture, not the Department of Natural Resources. Therefore, on May 10, 1982, the Department of Agriculture moved to intervene as a substitute for the Department of Natural Resources in order to appeal the judgment. The Department of Natural Resources' appeal time had been extended until May 20, 1982, so the Department of Agriculture's motion was within the extended time for appeal (although not within the

original time, which had expired on April 20, 1982). On the day the motion was made, the district court denied it on the ground that the Department of Natural Resources could adequately represent the interests of the State. The Department of Natural Resources never filed an appeal from the judgement below; the Department of Agriculture appealed both that judgement and the denial of its motion to intervene.

In reviewing the denial of the motion to intervene, we confront the initial question of the district court's jurisdiction to hear the motion. The first notice of appeal in this case was filed on April 5, 1982, more than a month before the Department of Agriculture's motion. This circuit follows the general rule that the filing of a valid notice of appeal from a final order of the district court divests that court of jurisdiction to act on the matters involved in the appeal, except to aid the appeal, correct clerical errors, or enforce its judgment so long as the judgment has not been stayed or superseded. *Farmband, Inc. v. Anel Engineering Industries, Inc.*, 693 F.2d 1140, 1145-46 (5th Cir.1982) (exception for enforcement of judgment); *Taylor v. Sterrett*, 640 F.2d 663, 667-68 (5th Cir.1981) (exception for matters not involved in appeal from interlocutory order); *Zimmer v. McKeithen*, 467 F.2d 1381, 1382 (5th Cir.1972) (general rule), *aff'd sub nom. East Carroll Parish School Board v. Marshall*, 424 U.S. 636, 96 S.Ct. 1083, 47 L.Ed.2d 296 (1976); *Silverthorne v. Laird*, 460 F.2d 1175, 1178-79 (5th Cir.1972) (district court opinion explaining judgment, filed after taking of appeal from that judgment, within exception for matters in aid of appeal). See also 9 J. Moore & B. Ward, *Moore's Federal Practice* 203.11 (1983). Several courts have held that the filing of a valid notice of appeal deprives the district court of jurisdiction to consider motions for intervention. *Armstrong v. Board of School Directors*, 616 F.2d 305, 327 (7th Cir.1979); *SEC v. Investors Security Corp.*, 560 F.2d 561, 568 (3d Cir.1977); *Rolle v. New York City Housing Authority*, 294 F.Supp. 574, 576-77 (S.D.N.Y.1969); *Hobson v. Hansen*, 44 F.R.D. 18, 19 (D.D.C.1968) (Wright, J., sitting by designation as district judge) (stating that district court had jurisdiction only because court of appeals had remanded case to district court to hear motions).

The Third Circuit, however, has reconsidered the position it took in *Investors Security Corp.*, *supra*. In *Halderman v. Pennhurst State School & Hospital*, 612 F.2d 131, 134 (3d Cir.1979) (en banc), the court reasoned that the Supreme Court decision in *United Airlines v. McDonald*, 432 U.S. 385, 97 S.Ct. 2464, 53 L.Ed.2d 423 (1977), had tacitly rejected the *Investors Security Corp.* rule by "approving the opinion in" *American Brake Shoe & Foundry Co. v. Interborough Rapid Transit Co.*, 3 F.R.D. 162 (S.D. N. Y.1942). *Halderman*, 612 F.2d at 134.

We are not persuaded by the Third Circuit's reading of *McDonald*. The reference to *American Brake* states simply that it is "[a] case closely in point." *McDonald*, 432 U.S. at 395 n. 16, 97 S.Ct. at 2470 n. 16. In *McDonald* itself, the motion to intervene was made before any appeal was filed. Nevertheless, assuming that the Supreme Court intended to endorse *American Brake*, we do not believe that *American Brake* is contrary to the general rule. In that case, the party who had appealed settled his claim "at or about the same time" as he filed the notice of appeal, and before the motion for intervention. *American Brake*, 3 F.R.D. at 164. That settlement removed the circuit court's jurisdiction

over the appeal, since it ended the case or controversy between the' appellant and the appellees. See *Bullard v. Estelle*, 708 F.2d 1020 (5th Cir.1983). American Brake thus appears to be simply an example of the exception to the transfer-of jurisdiction rule for invalid appeals. See *United States v. Hitchmon*, 602 F.2d 689, 690-91 (5th Cir.1979) (en banc) (appeal from unappealable order does not divest district court of jurisdiction during period that appeal is pending in circuit court); 9 J. Moore & B. Ward, *Moore's Federal Practice* 203.11 (1983).

We have found only one case that follows Halderman. In *Lane v. Bethlehem Steel Corp.*, 93 F.R.D. 611, 612 n. 2 (D.Md.1982), the motion for intervention was filed at the same time as the would-be intervenors' appeal. The court held that, under Halderman, it had jurisdiction to hear the motion. In a very similar case, the Ninth Circuit held that the district court had jurisdiction to hear a rule 60(b) motion filed on the same day as an appeal. *Long v. Bureau of Economic Analysis*, 646 F.2d 1310, 1318-19 (9th Cir.) vacated on other grounds, 454 U.S. 934, 102 S.Ct. 468, 70 L.Ed.2d 242 (1981). The Ninth Circuit did not rely on any exception to the transfer-of-jurisdiction rule, but simply refused to apply the rule where the events occurred on the same day. Long may be distinguishable from Lane, though, because in Long the district court decided the rule 60(b) motion on the day that it and the appeal were filed; Lane does not indicate when the intervention motion was ruled on. To the extent that Lane is inconsistent with Long, we disagree with it for the same reasons that we disagree with Haldeman.

Because we find Halderman's analysis of ,McDonald and American Brake unpersuasive, we adhere to the earlier rule that the filing of a valid appeal deprives the district court of jurisdiction to hear a motion to intervene. The district court was thus without jurisdiction to entertain the motion of the Department of Agriculture: we therefore affirm, although on different grounds, the district court's refusal to grant the motion.

C. The Elder Realty Company.

The Elder Realty Company, one of the private defendants below, has raised three points that pertain to it but not to the other private defendants. The arguments are: (1) that the injunction should not have issued against Elder Realty, because Elder Realty had not participated in the clearing but had merely sold the land to Bayou Lafourche (which cleared the land during the period of its purchase option); (2) that the injunction should not run against Elder Realty's heirs and assigns, because they have never indicated any intention to clear the land; and (3) that there is no evidence in the record to support a finding that a 4400 acre portion of the tract, which Elder Realty sold to Bayou Lafourche and which Bayou Lafourche immediately resold to Joseph Elder, was wetlands.

We decline to address any of these issues, because they do not appear to have been raised below. Elder Realty describes these contentions as appeals from the district court's denial, on June 23, 1979, of Elder Realty's motion for summary judgment. That motion, its supporting affidavit, and the accompanying memorandum of law seek relief only for Elder Realty and on only one ground: that, having sold all of its interest in the Lake Long

Tract, Elder Realty was no longer a proper subject of the injunction. We decline to consider questions raised for the first time on appeal. *Wiley v. Offshore Painting Contractors, Inc.*, 711 F.2d 602 at 608, 609 (5th Cir.1983).

V. CONCLUSION.

With respect to the wetlands determination, we hold:

- (1) that the district court erred in substituting its own wetlands determination for the EPA's final wetlands determination;
- (2) that the district court should have reviewed the EPA's wetlands determination under the arbitrary and capricious standard and that the administrative record should have served as the focal point for that review;
- (3) that notice and comment rulemaking procedures were not required before the EPA could apply its three-part methodology in determining the extent of wetlands on the property because the methodology was an interpretation of the administrative regulations;
- (4) that the federal defendants' interpretation of the 1977 wetlands definition is not inconsistent with the regulation, the Clean Water Act, or the United States Constitution,
- (5) that the EPA's final wetlands determination was not arbitrary and capricious.

Accordingly, the district court's wetlands determination is reversed to the extent that it is inconsistent with the agency's, and the EPA's determination is reinstated.

With respect to the activities issue, we hold:

- (1) that the bulldozers and backhoes were "point sources" within the meaning of the Clean Water Act;
- (2) that in filling in the sloughs and leveling the land, the landowners were redepositing fill material into waters of the United States, and that therefore, these activities constituted a "discharge of a pollutant;"
- (3) that the landclearing activities were not exempt from the Corps' permit requirements under section 404(f)(1) of the CWA because those activities constituted a change in use of wetlands under section 404(f)(2).

Accordingly, we affirm the district court's judgment that these landclearing activities may not be carried out without a section 404 dredge-and-fill permit; however, we note that should a section 404 permit application be filed, the Corps will be free to apply its expertise to that permit determination without any constraint from the district court's injunctive determinations except those we have expressly affirmed.

Finally, we hold that the district court should have dismissed the taking claim because it was premature, and that the district court's denial of the Louisiana Department of Agriculture's motion to intervene was proper because the filing of a notice of appeal nearly a month before the Department of Agriculture filed its motion deprived the district court of jurisdiction to entertain the department's motion.

The private defendants shall bear the costs of this appeal.

AFFIRMED in part and REVERSED in part.

Appendix - Final Wetland Determination,

Ed. Note - this is reinstated from the prior Avoyelles Sportsmen's League v. Alexander - Civil Action No. 78428 A in the United States District Court for the Western District of Louisiana

FOOTNOTES

1. The private defendants are the owners of the land that is the subject of this litigation. For a complete list of the individuals, see Avoyelles Sportsmen's League, Inc. v. Alexander (Avoyelles II), 511 F.Supp. 278, 280 n. 2 (W.D.La. 1981). As discussed intra, Elder Realty Co., one of the original defendants in this lawsuit, sold its land during the proceedings below. The Louisiana Landowners Association and the Louisiana Department of Natural Resources were also permitted to intervene as defendants in this action.

2. The federal defendants are United states Army corps of Engineers and Environmental Protection Agency officials. For a complete list of the original individuals see Avoyelles II, 511 F.Supp. at 280 n. 3. The individuals have changed with the change in presidential administrations.

3. This Act was originally called the Federal water Pollution Control Act. See S.Rep. No. 1236, 92d Cong., 2d sess. 99 (1972), U.S.Code Cong. & Admin.News 1972, p. 3668, reprinted in Environmental Policy Division of the Congressional Reference Service. 1 A Legislative History of the Water Pollution Control Act Amendments of 1972 (hereinafter cited only to "Legislative History"), at 282 (Senate Public Works Comm. Print 1973). In 1977, Congress approved the shortened "Clean Water Act" title. H.Rep. No. 830. 95th Cong. 1st Sess. 1 (1977), U.S.Code Cong. & Admin.News 1977. p. 4326. reprinted in 3 Legislative History: at 185.

4. Sometime before the defendants began their landclearing activities, loggers had harvested much of the commercially valuable hardwoods in the area.

5. The plaintiffs are a number of environmental groups and one interested individual. For a complete listing, see Avoyelles II, 511 F.Supp. at 280 n. 1.

6. Section 505(a) of the CWA provides for "citizen suits" challenging violations of the Act and administrative failure to perform a nondiscretionary duty:

(a) Except as provided in subsection (b) of this section, any citizen may commence a civil action on his own behalf--against any person--including (i) the United states, and (ii) any other governmental instrumentality or agency to the extent permitted by the eleventh amendment to the Constitution) who is alleged to be in violation of (A) an effluent standard or limitation under this chapter or (B) an order issued by the Administrator or a state with respect to such a standard or limitation, or (C) against the Administrator where there is alleged a failure of the Administrator to perform any action or duty under this chapter which is not discretionary with the Administrator. The district courts shall have jurisdiction. without regard to the amount in controversy or the citizenship of the parties. to enforce such an effluent standard or limitation. or such an order. or to order the Administrator to perform such act or duty, as the case may be. and to apply any appropriate civil penalties under section 1319(d) of this title. 33 U.S.C. 1365(a) (1976).

7. The plaintiffs also claimed violations of section 10 of the Rivers and Harbors Act of 1899. 33 U.S.C. 403 (1976), and La.Civ.Code arts. 667, 857 (Article 857 as repealed by Act of 1977 No. 169 1). the district court did not reach these claims because it concluded that a permit was required under the CWA, and the claims have apparently been abandoned on appeal.

8. Section 301(a) provides: Except as in compliance with this section and sections 1312, 1316, 1317, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful.

33 U.S.C. 1311(a) (1976). Section 404(a) provides: The Secretary may issue permits, after notice and opportunity for public hearings for the discharge of dredged or fill material into the navigable waters at specified disposal sites. Not later than the fifteenth day after the date an applicant submits all the information required to complete an application for a permit under this subsection, the Secretary shall publish the notice required by this subsection. 33 U.S.C. 1344(a) (Supp. V 1981).

9. Section 402 provides in relevant part: (a)(1) Except as provided in sections 1328 and 1344 of this title, the Administrator may, after opportunity for public hearing, issue a permit for the discharge of any pollutant. or combination of pollutants, notwithstanding section 1311(a) of this title, upon condition that such discharge will meet either all applicable requirements under sections 1311. 1312. 1316, 1317, 1318, and 1343 of this title. Or prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.

(2) The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate. 33 U.S.C. 1342 (1976 & Supp. V 1981).

10. Now that we have set out the alleged violations, perhaps a brief explanation is in order of why landclearing activities on wetlands might violate the Clean Water Act. The

CWA provides for regulation of the discharge of pollutants into "navigable waters." The term "navigable waters" is defined by the statute as "waters of the United States, including territorial seas." 33 U.S.C. 1362(7) (1976). Pursuant to its authority under 33 U.S.C. 403 (1976) (Rivers and Harbors Act) and 33 U.S.C. 1344, the Corps, in cooperation with the EPA, has further defined the term "waters of the United States" to include wetlands "adjacent" to "navigable waters," and "wetlands . . . the degradation of which could affect interstate commerce." 33 C.F.R. 323.2(a)(1)-(5) (1982). See also 40 C.F.R. 230.3(5J) (1982); *United States v. Holland*, 373 F.Supp. 665 (M.D.Fla. 1974).

11. We have held that enforcement of the Clean Water Act is not a "mandatory duty." *Sierra Club v. Train*, 557 F.2d 485 (5th Cir.1977).

12. During the course of this litigation, the EPA and the Corps reached an interagency agreement that the EPA should have the responsibility for making the final wetlands determination. The Attorney General of the United States subsequently issued an opinion in which he agreed that the "ultimate administrative authority to determine the reach of the 'navigable waters' for the purposes of 404" belonged to the EPA. 43 Op. Att'y Gen. No. 15 (September 5, 1979). While the private defendants have challenged the scope of the EPA's determination and the agency's methodology, they do not question the EPA's ultimate authority to make a final wetlands determination.

13. See *Avoyelles II*, 511 F.Supp. at 293, for a map showing both the EPA's and the district court's wetlands determinations.

14. For example, as discussed *infra*, the plaintiffs are now the parties who contend that the district courts *de novo* review of the wetlands determination was appropriate because the wetlands issue was jurisdictional. They did not even challenge the EPA's final wetlands determination below, although they believed that it was overly conservative. 2 Record at 462. The jurisdictional argument for *de novo* review was originally raised by the private defendants. 6 Record at 1647. The private defendants now concede that "the Court below was without power to substitute its own wetlands determination for that made by the agency. The role of the court ended upon a finding that the jurisdictional determination made by the agency was not proved Remand was the only appropriate judicial action. Louisiana Landowners Association Reply Brief at 23 n. 21. Perhaps the parties about-face may be explained by the fact that, in the end, *de novo* review appears to have benefited the plaintiffs while harming the private defendants.

15. As discussed *infra*, the private parties have suggested instead that *de novo* review was available because the determinations in the case concerned the agency's jurisdiction.

16. The plaintiffs suggest that the federal defendants waived their standard-of-review claim by agreeing to participate in the trial on the wetlands issue. *Avoyelles Sportsmen's League* Brief at 53. In *Di Vosta*, *supra*, the plaintiff argued that the government had agreed to *de novo* review BV submitting the case to the district Court on stipulated evidence. We found no merit in this argument since the parties cannot agree to expand

the jurisdiction of the federal courts. 488 F.2d at 679 (citing *American Fire & Casualty Co. v. Finn*, 341 U.S. 6, 71 S.Ct. 534, 95 L.Ed. 702 (1951)).

17. The landowners suggest that we need not defer to the agency's scientific expertise in this case because the agency relied on outside consultants. As long as the agency conducts its own independent and thorough review of the consultants' report, the agency's reliance on outside reports is within its discretion and does not change the standard of review. See *Save Our Wetlands v. Sands*, 711 F.2d 634 at 635642 (5th Cir.1983) (Corps may rely on outside consultants in preparation of environmental impact statements); *Buttrey*, supra, 690 F.2d at 1185 (Corps' wetlands determination reviewed under arbitrary and capricious standard where Corps relied on information supplied by other individuals and agencies).

18. The controversy in this case concerns whether the vegetation indicative of wetlands is limited to "obligate hydrophytes"--in particular, Bald Cypress, Black Willow, Button Bush Swamp Privet, Water Elm, and Water Tupelo--or whether "facultative hydrophytes"--including Green Ash and Nuttall's Oak--are also wetlands indicators. The obligate hydrophytes exist in deep swamp areas or cypress swamp areas, which are inundated and water dominated most of each year. The facultative hydrophytes cannot withstand such extended periods of inundation, but can survive substantially shorter periods of intermittent inundation and saturation.

19. The Vicksburg consultant, Dr. Rhodes, believed that only the obligate hydrophytes were wetlands indicators. Admin. Record, Tab 3.17, and he determined that approximately 35% of the Lake Long Tract was a wetland. *Id.* The EPA's expanded analysis of vegetation, soil, and hydrology, resulted in a determination that approximately 80% of the tract was a wetland. See Final Wetlands Determination. 2 Record at 372.

20. Interestingly enough, the State of Florida, which also has extensive wetlands within its borders, has participated in this litigation as an amicus curiae in support of the plaintiffs position. i.e.. the position that expands the federal agencies' jurisdiction over state lands.

21. Section 553 provides:

(b) General notice of proposed rule making shall be published in the Federal Register, unless persons subject thereto are named and either personally served or otherwise have actual notice thereof in accordance with law. The notice shall include--

- (1) a statement of the time, place, and nature of public rule making proceedings;
- (2) reference to the legal authority under which the rule is proposed; and
- (3) either the terms or substance of the proposed rule or a description of the subjects and issues involved.

Except when notice or hearing is required by statute, this subsection does not apply--

(A) to interpretative rules, general statements of policy, or rules of agency organization, procedure or practice; or

(B) when the agency for good cause finds (and incorporates the finding and a brief statement of reasons therefor in the rules issued) that notice and public procedure thereon

are impracticable unnecessary, or contrary to the public interest.

(c) After notice required by this section. the agency shall give interested persons an opportunity to participate in the rule making through submission of written data, views or arguments with or without opportunity for oral presentation. After consideration of the relevant matter presented the agency shall incorporate in the rules adopted a concise general statement of their basis and purpose. When rules are required by statute to be made on the record after opportunity for an agency hearing, sections 556 and 557 of this title apply instead of this subsection.

(d) The required publication or service of a substantive rule shall be made not less than 30 days before its effective date. Except--

(1) a substantive rule which grants or recognizes an exemption or relieves a restriction;

(2) interpretative rules and statements of policy; or

(3) as otherwise provided by the agency for good cause found and published with the rule.

5 U.S.C. 553 (1976).

22. We have cited the most recent edition of the administrative regulations except where recent changes in the regulations might render such citations inappropriate.

23. Section 551(4) provides:

(4) "rule" means the whole or a part of an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy or describing the organization, procedure, or practice requirements of an agency and includes the approval or prescription for the future of rates, wages, corporate or financial structures or reorganizations thereof, prices, facilities, appliances, services or allowances therefor or of valuations, costs, or accounting, or practices bearing on any of the foregoing 5 U.S.C. 551(4) (1976).

24. See also *CBS, Inc. v. United States*, 316 U.S. 407, 418-20. 62 S.Ct. 1194. 1200-02, 86 L.Ed. 1563 (1942); *Pickus v. United States Board of Parole*. 507 F.2d 1107. 1111-13 (D.C.Cir. 1974); *Lewis-Mota v. Secretary of Labor*. 469 F.2d 478,481-82 (2d Cir.1972); *Texaco, Inc. v. Federal Power Commission*. 412 F.2d 740. 743-45 (3d Cir.1969).

25. The 1977 amendments were promulgated in compliance with the APA's rulemaking procedures. see 42 Fed.Reg. 37122 (July 19, 1977).

26. We note that less than a year elapsed between the promulgation of the 1977 definition and the commencement of this litigation. Thus. the agencies were in the midst of "filling in the interstices" of the definition when they were asked to make their final wetlands determination. The Supreme Court stated in *Chenery*, *supra*, that an agency cannot be forced to apply the old regulations while it is formulating the new ones. 332 U.S. at 202, 67 S.Ct. at 1580 ("To hold that the Commission had no alternative in this proceeding but to approve the proposed transaction, while formulating any general rules it might desire for use in future cases of this nature, would be to stultify the administrative process. That we refuse to do").

27. Heightened deference is due an agency's interpretation of "its own" regulations. Although here it was the EPA that applied the Corps' definition in making the final wetlands determination, we see no reason to lessen our deference in this case. The methodology was developed through consultations between the Corps and the EPA. Further, the EPA subsequently added the same definition to its own regulations. 40 C.F.R. 230.3(t), 230.41(a)(1) (1982). On appeal, both agencies have offered the same interpretation of "their own" regulations.

The private landowners contend that they should have been permitted to present testimony at trial from certain agency officials about how and why the Corps and the EPA arrived at their agreement. We find no merit in this contention. The EPA explained the reason for its choice of methodology in its final wetlands determination. An inquiry into the mental processes of administrative decisionmakers is generally to be avoided. Where administrative findings are made contemporaneously with the decision, there must be a strong showing of bad faith or improper behavior before a court may go behind those findings. *Overton Park supra*, 401 U.S. at 420, 91 S.Ct. at 825; accord *Camp, supra*, 411 U.S. at 143, 93 S.Ct. at 1244. No such showing has been made here.

28. The landowners read the word "technical" as a synonym for "minor." The word may also be understood to suggest a scientific change in the sense of "technical expertise."

29. We note that the Corps recently decided not to revise its wetlands definition even though it had received many comments on the definition. 47 Fed.Reg. 31795 (July 22, 1982).

30. See also 1 Legislative History, at 250 (statement of Rep. Dingell, member of the Conference Committee).

31. The Senate also defeated Senator Bentsen's attempt to amend section 404 to restrict application of the permit program to waters navigable in fact and their adjacent saline or freshwater wetlands. 4 Legislative History, at 901-50.

32. See, e.g., *Weismann v. District Engineer*, 526 F.2d 1302 (5th Cir.1976) (Corps' jurisdiction extends to artificially created canals); *P.F.Z. Properties, Inc. v. Train*, 393 F.Supp. 1370 (D.D.C.1975) (mangrove wetlands fall within corps jurisdiction under section 404); *Natural Resources Defense Council, Inc. v. Callaway*, 392 F.Supp. 685 (D.D.C.1975) (striking down Corps' narrow view of its jurisdiction under section 404); *United States v. Phelps Dodge Co.*, 391 F.Supp. 1181, 1187 (D.Ariz. 1975) (normally dry arroyos through which water may flow within corps, jurisdiction where water will ultimately end up in public waters); *United States v. Holland* 373 F.Supp. 665 674 (N.D Fla.1974) (mangrove wetlands within corps jurisdiction).

33. The landowners appear to have abandoned the claim, persuasively addressed by the district court below, that the CWA as applied would be beyond the scope of Congress' power under the commerce clause of the United States Constitution. U.S. Const. art. 1, 8. See *Avoyelles II*, 511 F.Supp. at 286-87. They now contend that Congress simply did not intend to exercise its power to regulate all discharges affecting interstate commerce. See

United States v. Darby, 312 U.S. 100, 61 S.Ct. 451, 85 L.Ed. 609 (1941) (Congress' power under commerce clause extends to intrastate activities affecting interstate commerce). As should be apparent from our previous discussion, we find no merit in this argument. See *Buttrey v. United States*, 690 F.2d 1186, 1189 (5th Cir.1982) (Congress' delegation of dredge-and-fill permitting authority to Corps within commerce clause power); *United States v. Byrd*, 609 F.2d 1204, 1209 (7th Cir.1979) (extension of CWA jurisdiction to cover filling activities adjacent to inland lakes visited by interstate travelers within commerce clause power); *Leslie Salt Co. v. Froehlke*, 578 F.2d 742, 755 (9th Cir.1978) ("navigable waters" within meaning of CWA to be given "broadest possible interpretation under Commerce Clause"); *United States v. Ashland Oil & Transp. Co.*, 504 F.2d 1317, 1327-28 (6th Cir.1974) (control over non-navigable tributary within commerce clause power); *Holland*, supra, 373 F.Supp. at 672-73 [M.D.Fla.1974] (extension of CWA to mangrove wetlands within commerce clause power).

34. One expert believed that 60% of the tract was a wetland, while the estimates of the other members of the EPA task force ranged from 90-98%.

35. The landowners also suggest that the EPA improperly examined the three factors--soil, hydrology, and vegetation--in isolation. Contrary to this suggestion, the EPA's decision was based on the complex interrelationships among the three factors.

36. The landowners have pointed out a discrepancy between Dr. van Beek's and Dr. Combs' testimony at trial about hydrology. This minor discrepancy does not significantly undermine the agency's conclusions. The landowners also attack Dr. van Beek's credentials: they emphasize his lack of a degree in hydrology from an American institution. Dr. Van Beek had studied hydrology in the Netherlands; the fact that he studied outside of the United States certainly does not render him incompetent.

37. For example, the federal defendants suggested in their final wetlands determination that "de minimis" discharges of pollutants might not require a 404 permit. But see *Minnehaha Creek Watershed District v. Hoffman*, 597 F.2d 617, 626-27 (8th Cir.1979) (rejecting district court's conclusion that "significant alteration in water quality must be demonstrated before the addition of a particular substance to navigable waters can be classified as the discharge of a pollutant"). Had the Corps been permitted to make the initial determination, it might have concluded that the permit should issue because of the de minimis impact of the activities, a factor that it was free to consider in making its determination rather than suggesting that no application need be made in the first place.

38. Landclearer Herbert Costello testified that he used only v-type cutting blades on his bulldozers, and that these blades could not dig up chunks of dirt. 33 Record at 162,169,174,184, 194. He also denied filling in the sloughs, id at 171-72,222, although he admitted digging one drainage ditch and a number of holes. Id at 187-88, 223. Soybean farmer Bill Easterling stated that he had not leveled the ground, id at 243, or used dirt blades that would have moved significant portions of earth Id at 251. He claimed that he did not intend to dig any drainage ditches or use any fertilizer. Id at 246, 241. He also assured the court that he uses only "EPA-approved" pesticides. Id. at 241.

39. Stephen Forsythe, a United States Fish and Wildlife Service biologist, had observed the landclearing activities in September, 1978. He testified that the trees and vegetation were cut down at or slightly below the ground, pushed into massive windrows and burned. He claimed that large chunks of dirt had been torn up and that a number of sloughs which had collected rainwater in the past had been filled in. 9 Record at 7-34. His testimony was corroborated by a number of expert and lay observers: Ray Palerrno, an employee of the Louisiana Department of Wildlife and Fisheries 16 Record at 7-22; John Maillet. 31 Record at 107-22; and Lyle Gremillion. *id.* at 129-38. Other experts testified that additional drainage ditches would be required if the tract was to be used for soybean farming. 11 Record at 9-15. 43-44 (testimony of Michael Matterne, agronomy expert): 15 Record at 6--18 (testimony of Harold LaHave, Department of Natural Resources forester).

40. After persistent questioning at oral argument, the federal defendants explained further that, in their view, if the vegetation was cut down without significant disturbance of the soil and then removed to dry land, no permit would be required. They further explained that, in their view, if the vegetation were cut down and put back into the wetlands soil, however, then there would have been a redeposit in the wetland, and hence a discharge.

41. It is equally clear from the record that the activities in this case did not involve a "de minimis" disturbance; hence we have no reason to determine whether de minimis disturbances are exempted from the Act. See *Minnehaha*, *supra.* at Note 37.

42. See *Avoyelles I.* 473 F.Supp. at 533-.35 (quoting extensively from the Corps' regulations, 33 C.F.R. 320.4(b)(1), (2), (3), & (4)).

43. In *National Wildlife*, *supra.* the EPA argued that an activity was a discharge requiring a 402 permit only if materials were introduced into the water "from the outside world." 693 F.2d at 165. No one has urged here that the materials must come from an external source in order to constitute a discharge necessitating a 404 permit, nor would we expect them to, since 404 refers to "dredged" or "fill" material. As discussed *infra.* "dredged" material is by definition material that comes from the water itself. A requirement that all pollutants must come from outside sources would effectively remove the dredge-and-fill provision from the statute. We note further that the *National Wildlife* court chose the EPA's interpretation over the district court's in part out of deference to a long and consistently held agency interpretation. Here, the agencies' views about whether the landclearing activities would require a permit have not been completely consistent. In its final wetlands determination, the EPA concluded that the clearing, plowing and discing activities would not require a permit, although it admitted that this view had not been given any thorough consideration. See *National Wildlife*, 693 F.2d at 168 ("thoroughness of an agency's reasoning' bears on the proper degree of deference"). Now, the Corps and the EPA agree with the district court that most of the activities do require a permit. This "change," however, appears to have resulted from the agencies' changing view of the facts, rather than any alteration in their view of the law. Since the agencies do not have any relevant disagreement with the district court, we need not choose between the agencies' and the district court's interpretations. We hold only that the agencies'

interpretation that redepositing materials may be a discharge requiring a 404 permit is " 'correct' to the extent that it can be said with complete assurance that any particular interpretation of [this] complex statute . . . is the 'correct' one." *Natural Resources*, supra, 421 U.S. at 87. 95 S.Ct. at 1485: accord *DuPont de Nemours*, supra, 430 U.S. at 134, 97 S.Ct. at 978.

44. The district court correctly noted that 404(f)(1) was designed to be a narrow exemption. *Avoyelles* 1.473 F.Supp. at 535 n. 12 (quoting the statements of Rep. Hersha during the House debates. 3 Legislative History, at 420).

45. The private defendants point out that if the district court is correct that 404(f)(1) applies only to ongoing activities, 404(f)(2) would not appear to be necessary.

46. We recently had occasion to distinguish between the activities that significantly change the character of the wetlands and those that do not. See *Save Our Wetlands, Inc. v. Sands*, 711 F.2d 634 (5th Cir.1983). In *Save Our Wetlands*, we specifically noted how the activities in this case had virtually destroyed the wetlands, while the construction activity in that case had not:

The work in *Avoyelles* was intended to permanently change the area from wetlands into a non-wetland agricultural tract for row crop cultivation. All timber and vegetation were to be cut and cleared. The area was to be drained and leveled. Trees and other vegetation were to be burned and the ashes disced into the land. Nonburnable materials were buried on the plot. It was within this factual setting that the *Avoyelles* court found that a permit was required. One of the key elements behind Judge Scott's decision was the fact that the work would destroy the wetlands.

Here, the work involved the felling of trees with chain saws. The trees and cleared vegetation were to be windrowed and allowed to naturally deteriorate. The wooded swampland to be cleared here will be changed to swampland vegetation with shrubs, grasses and other low growth. The wetlands involved here will not be converted as in *Avoyelles*. The trees and vegetation to be windrowed will not be used to "replace an aquatic area with dry land or change the bottom elevation of a waterbody." *Save Our Wetlands*, supra, at 647 (quoting *Avoyelles* 1. 473 F.Supp. at 535).

47. The just compensation clause of the fifth amendment provides: "[N]or shall private property be taken for public use." U.S. Const. amend. 5.